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Original

THE TREATMENT OF THE NERVOUS FORM OF INFLUENZA.

BY DR. RICHARD DREWS.

Specialist for Diseases of Children, Hamburg.

The excellent effects of Salophen as an antirheumatic in acute muscular rheumatism and as an anti-neuralgic for the relief of the pains in the most diverse nervous affections (Cephalgia, migraine, trigeminal and intercostal neuralgia) have been demonstrated by Siebel, Guttmann, Frolich, Drasche, Flint, Caminer, Koch, Lutz, Gerhardt, Osswald, Koster, Rosenheim, De Buck and Vanderlinden, Waters, Lavrand, Claus, Brown, Woodbury and by myself. It was these observations which induced Claus, of Ghent, to employ Salophen against the various symptoms of the nervous form of influenza, as he was of the opinion that the neuralgias occurring in this disease are not primarily due to influenza, but depend upon a diathesis (arthritic): To combat this diathesis, Claus, during the great influenza epidemic of 1889-90, tried in turn, antipyrene, salicylate of sodium, salipyrene, salol, agathin (salicylmethyl-phenylhydrazine), phenacetine exalagine, etc., most of which drugs exert an arthritic action through the sali-

cyclic acid molecule contained therein. In consideration of the cost he made especial use of Salophen and with good results—a fact which he attributed to the important part played by arthritis in the development of these neuralgic affections. After the introduction of Salophen (acetylparamidophenol salicylic ester) a tasteless and odorless preparation which Claus designates as one of the most important acquisitions of modern therapeutics, he employed in place of salicylate of sodium this remedy, which contains 51 per cent. of salicylic acid and possesses anti-septic and antiarthritic properties. Claus administered salophen in 20 cases of influenza attended with the most diverse neuralgias—sciatica, intercostal neuralgias with herpes zoster, cephalgias, rhachialgias, etc., and obtained in all cases, without exception, a considerable improvement, almost immediately after the use of the drug. In the majority a cure occurred in two days.

Claus warmly recommends salophen in the nervous forms of influ-

enza, which, in his opinion, an anti-pyretic and antiarthritic par excellence not only on theoretical, but practical grounds, as it combines the specific effects of salicylic acid and the aniline bases without having their disagreeable after-effects and exerts, besides, a very distinct antiseptic action.

In the *Munchener Med. Wochenschrift*, No. 36, Dr. Arthur Hennig, in his "Contribution to the Symptomatology and Therapy of the Nervous Forms of Influenza," also recommended the employment of Salophen in the following words:

"Among the anti-neuralgics employed by me none has so reliable an action as Salophen, which for several years has been highly extolled by numerous authors, especially in the treatment of acute articular rheumatism. It has been positively demonstrated that this drug is separated into its components in the alkaline intestinal secretion, viz.: Into salicylate of sodium and acetyl para-aminophenol. Owing to this it has an advantage over the salicylate, which is dissolved in the acid gastric juice and produces more or less severe gastric disturbance after a time, while it is superior to Salol, which is also decomposed in the intestinal canal by reason of its complete freedom from taste and odor and its perfect innocuousness."

In accordance with the intensity and duration of the disease, the individuality and age, Hennig administered doses ranging from 1.0—5.0 gm. pro die, but often a few doses of 0.5 gm. every two hours or at shorter intervals sufficed to ameliorate or remove violent neuralgias or other nervous symptoms of influenza. In general, he recommends for children in doses of 0.25—0.5 gm. three to five times daily at intervals of two or three hours; for adults, the double dose. As soon as the disturbances subside the quantity should be reduced, but for several days after disappearance of all subjective symptoms the patients should take small doses several times daily, by which they seem to be often protected against severe sequela.

Hennig highly recommends Salo-

phen "in the protean group of symptoms of the nervous form of influenza, as it is completely devoid of any unpleasant or injurious after effects, and can be readily administered," and has also given favorable results in cases where a large array of other well-accredited analgesics had been exhibited without success."

This warm recommendation of Salophen in the nervous forms of influenza by Hennig had induced me to publish my own experience with the remedy in this type of the disease.

During the severe ravages of influenza in the winter of 1889-90 the form designated by Hennig as the respiratory predominated, while the nervous manifestations were in the background. In the more or less severe epidemics which have occurred almost every year since then the character of the disease has changed, so that more frequently than formerly cases are observed in which the nervous symptoms were more pronounced than the coexisting disorders of the respiratory and circulatory organs of the gastro-intestinal tract, as well as cases in which the nervous system, especially the peripheral, was also involved, the patients complaining chiefly of more or less marked nervous troubles.

These nervous phenomena consisted above all in an indefinite, dull headache, which some patients described "as if the head was being compressed," while others had a sensation "as if the hair was being torn out." There were also present feelings of dizziness and emptiness in the head, protracted severe prostration of the bodily and mental powers, which sometimes persisted for a number of weeks or months, and more or less marked sweating. Aside from these general symptoms rheumatic and rheumatoid pains were especially prominent; pains in the back, especially in the scapular and sacral regions, tearing and radiating pains in the chest and over the heart, in the muscles of the arms and legs, especially in the calves, which occasionally were extremely painful on pressure, and in rare instances even slight paresis of the arms and legs,

with diminution of the tendon reflexes, especially the patellar reflex. In the case of a strong, previously healthy man, there occurred frequently during the day very violent clonic spasms of all the muscles of the right side of the neck, without external signs, swelling or sensitivity to pressure.

In close connection with these symptoms were neuralgias in the course of certain nerves, and lancinating pains; neuralgias of the supra and infra-orbital, trigeminus, sciatic and the intercostal nerves, sometimes with herpes zoster. Further, I observed, especially in children and women, marked acceleration of the pulse (160 to 180 in a minute), without any elevation of temperature. This was accompanied by a pain in the cardiac region, producing oppression and a feeling of anxiety, although no lesion of the heart could be determined by percussion or auscultation, and are regarded by Henning as neurosis of the vagus nerve. I observed cutaneous eruptions in only a few cases in the form of erythema, resembling measles and scarlatina, which usually lasted but a few hours, and in two cases an extremely marked urticaria over the entire body. In three cases the patients who would otherwise not have come under treatment for influenza, were compelled to seek medical aid in consequence of a violent distressing pruritus of the extensor surfaces of the arms and legs, especially of the palms of the hands; and examination of the urine for sugar gave, however, a negative result.

Among the disturbances of the special senses I observed weakness of sight, photophobia, and in one case, diplopia; diminution of hearing, hypereraesthesia, shrill, discordant noises, or ringing, blowing, roaring sounds; diminution of the sense of taste, or a bitter sour perverse taste, diminution of the sense of touch and a feeling as if the hands had fallen asleep.

While in the respiratory and gastric form of influenza in the winter of 1889-90 antipyrine exerted so favorable an effect and acquired a

high reputation as a specific, it was found in the later cases of the nervous form that this drug acted less promptly and reliably. The similarity of the muscular pains of influenza to the tearing, lancinating pains of acute muscular rheumatism led me to the employment of salicylate of sodium, which had a really excellent effect upon the pains, especially in cases where gastric disturbances were absent or slight. In some instances, however, where besides the nervous symptoms of influenza decided disturbances of the gastro-intestinal tract existed, or where from previous use the patients had acquired a repugnance toward the salicylate, its action was not so favorable, the gastro-intestinal disorders were increased and there were manifested even after comparatively small doses the disagreeable symptoms of salicylic acid intoxication, which enhanced the nervous symptoms of influenza, so that the drug had to be discontinued.

For this reason I welcome with more than ordinary pleasure a new remedy prepared by the Farbenfabriken vorm. Friedr. Bayer & Co., which possesses the favorable effects of salicylic acid without its unpleasant properties, and which I soon learned to know as an excellent substitute for salicylate of sodium in acute articular and muscular rheumatism. The employment of Salophen in the nervous form of influenza has afforded me the utmost satisfaction, since its effect upon all the nervous manifestations has always been remarkably prompt and reliable, and in most instances more effective than salicylic acid or salicylate of sodium. This is probably to be explained on the ground that the salicylic acid separated from Salophen by the alkaline intestinal juice being in the nascent state acts more vigorously upon the toxines secreted by the supposed micro-organisms and circulating in the blood than salicylic acid introduced by the mouth.

In the nervous type of influenza, as well as in acute rheumatism, it is not necessary to give twice the dose of Salophen as salicylic acid, as might be theoretically assumed, but

the same doses suffice to produce an equally good or even better effect.

In the violent, sudden attacks of nervous influenza I administered to adults an initial dose of 2.0 gm. of Salophen and then continued in 1.0 gm. doses at two or three hours' intervals, in daily amounts of 5.0—6.0 gm.; while in cases where the symptoms were less intense and in feeble persons, especially women, doses of 0.5—0.75 gm. at two or three hours' intervals sufficed to rapidly alleviate the diverse neuralgic pains and to effect a complete cure in two or three days. I give doses of 0.3—0.5 gm., according to age, and total amounts of 4.0—5.0 gm. daily.

In not a single case were disagreeable symptoms observed after the employment in adults and children.

The influence of salophen upon the nervous phenomena of influenza is so favorable that I do not hesitate to regard this remedy as a specific in this form of the disease, just as antipyrine has been termed a specific in the respiratory form.

As special advantages of Salophen I consider its complete freedom from odor and taste, but above all its perfect innocuousness, which enables the physician to dispense it to poor patients by ordering it in knife-pointful doses instead of powders, by which the price is greatly reduced.

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VASCULAR MOBILITY AND STASIS, INTERRUPTION, ARREST AND RESTORATION OF THE SANGUINOUS WAVE, PHYS- IOLOGICAL AND PATHOLOGICAL

BY THOMAS H. MANLEY, M. D., NEW YORK.

When these studies on the blood were first undertaken by me, it was my intention to take up seriatim, and consider in detail, with considerable fullness, all its morphological elements, especially the corpuscles; but as my researches progressed the bibliographical and scientific sides of the subject were found to augment into such vast proportions that it

must occupy two or more years, in semi-weekly contributions, with the space allowance, to even imperfectly and briefly cover the ground. Besides, it was believed finally that a lengthy, technical and minute analysis would have little interest for the busy practitioner, and be of little practical value, except to teachers or those making a special study of

the circulation; it is, therefore, with a sense of reluctance that I have thus cut short the consideration of the corpuscles, after dwelling briefly on the leucocytes, and turn abruptly to a few practical features on the vitalizing current and the conduits which convey it to all the organs and structures in the body, with the hope that though, perhaps, little original may be offered, some features will be presented, which it is hoped, will revive our interest, and stimulate others to enter this practically unbroken ground, so lately opened to us, through the microscope.

VASCULAR MOBILITY AND SANGINOUS STASIS.

Last year during a series of experiments, undertaken with a view, primarily, of elucidating the immediate effects of trauma succeeding a fracture of a bone-shaft on the circulation, in the limb beyond the seat of injury, my surprise was great when in some cases, when the limb was somewhat deliberately twisted on its axis, the force of the arterial impulse was not only diminished, but wholly lost.

In the dog and cat, this absence of pulsation in the larger trunks would continue for hours; in one case it remained over night.

In order to avoid error, immediately after the bone was shattered the main arterial trunk was denuded and exposed to view; when it was evident to inspection and direct digital compression that there was no blood moving through the vessel.

This incident struck me as most remarkable, when the query arose: can a part maintain its integrity and preserve its vitality for any considerable period of time, say, from three to forty-eight hours after its arterial supply is entirely cut off; or is absolute anemia or hematic stasis compatible with the life of a member of the body?

So far an endeavor had been made to answer this question by rough experiment; now, finer, more delicate and accurate tests were resorted to.

In the webbing of the frog's foot

we have a tissue, in which, at leisure, in the living animal, we may investigate all the movements of the blood-current and the various corpuscles.

It was my impression that, in the canine and feline, the blood, after damage of a large artery, in injury to the bone, made its way to the peripheral vessels, by collateral paths; but now that the blood-stream was under my immediate eye, that was proven to be an error; for in every instance after the femoral-shaft was forcibly disorganized by crushing or tortion the blood-flow in the digital capillaries, the venulae and arterioles was instantly stopped, and not a single corpuscle moved.

In the same areas after an hour or two, a slight sluggish movement was noticed; in others, after six hours, movement was restored in the larger capillaries, though slowly. In about one-half the so traumatized limbs, no motion could be discerned in any of the vessels, until the day following, at the same hour. In all, however, by the second day, thorough dilatation of the vessels was well marked, the movement of the blood had recommenced in all the vessels; in other words the circulation had been re-established.

A KNOWLEDGE OF THIS FACT AS APPLIED TO FRACTURE-TREATMENT.

It had long been my conviction in the treatment of fractures of the bones of the extremities, that our modern methods of treating them in many important particulars were based on wrong principles, and if we would obviate or prevent gangrene, sloughs, muscular-atrophy, ankylosis, delayed union, or non-union, we must permit the vessels unfettered freedom.

"This topic it was my privilege to present lately before a large body of surgeons in a Western city; therefore, it will be needless to cover the same ground here.

* A Study of the Element of Vascular-Compression in Fracture-Treatment, as Based on Clinical and Experimental Data. By Thomas H. Manley, M. D. Mississippi Valley Med. Asso. Section Surgery October 12, 1895. G. A. Davis, Detroit, published in "Medicine."

It is enough to repeat that a limb, the seat of a serious fracture, is temporarily killed. Its animation is, for the time, suspended. The nerve influence is yet intact, for I have found that nerve tissue will endure the arrest of the circulation longer than any other; but the blood-flow has stopped or is seriously retarded.

Now, after a limb is fractured, quite regardless of the quality of the lesion, we hasten to make matters worse; we tug and drag on the muscles, encumber the limb by hard, resisting splints, and to add fresh dangers apply layer after layer of a firm muslin bandage; all because the people clamor for having "something done to have the bone set."

But, imagine the absurdity of having the bone "set," while its life-giving element, which it depends on for its nutrition and repair, is embarrassed and impeded in its movements, by mechanical appliances! No; the cardinal, underlying principle, which should guide us in fracture-treatment, is vascular re-establishment. This is secured by the adoption of rational measures.

Let us remember well, the anatomy of the muscles, which are the osseous levers; secure muscular relaxation, flex the limb, place it in a comfortable attitude; attending to it that such measures are provided as will favor the full return of the blood-current in the most distant, peripheral vessels. Splinting for adjustment purposes is indispensable after vascular restoration, but its employment must be governed by a judicious discrimination, or its consequences may be disastrous. Those who are specially interested in this phase of fracture-treatment would do well to peruse with care the late treatise of M. Lucas-Championiere.*

My aim has been to show that the temporary stagnation of blood in a part is not incompatible with its ultimate re-establishment of function. This short digression in fracture has been to indicate the important role this feature of pathology alone plays in this common lesion.

Now, we may proceed to the concern of the circulation and its dis-

turbances, as it applies, under a great diversity of circumstances.

NEURAL ELEMENT IN VASCULAR STATIS.

It has been observed that the nerve is invulnerable in a remarkable degree.

A case of fracture of the femur came under my care last year, in which the limb was killed outright and permanently. The forward wheel of a truck had passed over a man's thigh—right. He was at once admitted to the hospital. The limb was stone cold and numb up to the point of fracture, over all those areas supplied by the great sciatic nerve, though in the inner and upper part of the thigh, those parts vitalized by the obturator and anterior crural, preserved normal sensation. Medulated nerves do not decussate, and, therefore, when a main trunk suffers annihilation or damage, there is not the same loop-hole of escape, provided by the anastomosing of arteries. From the symptoms we suspected serious disorganization of the principal nerve trunk, as well as the femoral artery. Mortification in the limb set in early, and on the third day it was amputated.

Now, it was found that the great sciatic nerve had been caught by the sharp edge of the upper pigment and nearly torn in two.

VASCULAR STASIS IN DISLOCATION.

In subglenoid dislocations it is quite impossible to conceive how the axillary-artery can escape damage; and it probably does not, but the collateral vessels are equal to the emergency, and the circulation seldom suffers serious damage.

But, when the brunt of force falls on the brachial-plexus of nerves, in these dislocations the consequences may be very grave.

Professor Fred S. Dennis, of New York, some time ago exhibited such a case in a boy. The arm, cold and wasted, hung by his side powerless and helpless, the head of the humerus rolling out of its socket as often as it was returned. Amputation had to be performed later.

We may witness many instances

(*Traitemente Des Trac. Des Os.)

of complete anemia or stasis in a part, with full recovery of vitality or restoration of function. It is important though, when we wish to artificially induce it, that certain conditions are observed:

ARTIFICIAL STASIS.

1. It should be induced gradually.
2. Care must be observed that no damage is inflicted on the vessels.
3. It must not be too protracted.
4. Accessory aids to circulatory restoration.

(To be Continued.)

L'ONANISME CHEZ LA FEMME.

BY DR. POUILLET, FRANCE.

Translated from the sixth edition by Dr. F. E. Chandler.

(Continued from last Number)

CHAPTER V.

(Continued),

A—LOCAL TROUBLES.

The local troubles occasioned by masturbation are numerous. Some are benign, while others are of a certain gravity.

1. Benign.—Here, let me mention flaccidity and discoloration of the genital mucosa; excoriations of the vulva, clitoris or introitus vaginae; erythema of these organs, that first degree of inflammation whose sequelae are congestion and pruritus.

Next come rupture of the hymen, a lesion of but slight importance per se, but which may cause much unhappiness if the patient marry; erythema and sometimes eczema of the upper-inner part of the thighs; idiopathic leucorrhea caused by a local or general disturbance of the innervation of the genital muciparous glands.

Vulvitis and abscesses of the labia majora caused by it are not uncommon. Vaginitis, caused by the direct irritant action of a foreign body, is often seen, as is also hypersecretion of the vulvo-vaginal glands.

The genesis of this is easily understood if we consider that the onaniste, seeking but one thing—pleasure—endeavors to prolong it as much as possible by frequent pauses in her practices, something that is particularly favorable to hypersecretion of Bartolin's glands; phleg-

monous inflammation and abscesses of these glands, followed by fistulae, develop often after an intense vulvitis or under the direct action of masturbation.

Finally, chronic vulvitis or vaginitis, with their principal symptom—leucorrhea.

These troubles are so frequent that Deslandes affirms that out of twenty cases of leucorrhea or of vulvar or vaginal inflammation fifteen to eighteen were caused by masturbation.

We must here call particular attention to the genital discharge of little girls, on the nature of which we should be well informed for medico-legal reasons. This discharge has often caused a suspicion and accusation of rape. I will quote in this connection some extracts from the report of an expert concerning a complaint of this kind preferred against an innocent man. We shall find at the same time a true picture of the disorders that onanism causes in the external generative organs of children.

Mr. B— informed us that on the 9th inst. at 7 o'clock in the morning his daughter Louise, aged 14, who had been left alone in the house, had been violently thrown upon the bed by his neighbor, Mr. E—, and abused.

Louise B—, questioned by us, replied with much hesitation, but finally confirmed her father's statement.

Examination of the little girl: Louise B——, not yet nubile, is of small size, delicate constitution and extremely lymphatic; complexion pale, and livid circles around the eyes.

I. The sexual organs are well developed, but already withered and discolored; the labia majora, very thick and flaccid, are separated at their lower angle.

II. The vulva showed a much enlarged, funnel-shaped entrance, at the bottom of which was the hymen, much stretched but still unruptured. This membrane formed a kind of ring around the gaping vaginal orifice, whose dimensions were such that it admitted the forefinger easily; the fourchette was depressed, but not torn.

III. There was no excoriation of these parts. * * * But they were moistened by a discharge that seemed to us of leucorrheal nature.

Conclusions: It is evident that Louise B—— had not been raped. * * * But the withering of the organs, the infundibuliform arrangement of the vulva, the depression and malformation of the hymen, the dilation of the vaginal orifice, prove a habit of masturbation of ancient date and, doubtless, the introduction of a more or less voluminous body into the vagina. The discharge from the sexual organs can not come from a rape three days previous; it has existed for a long while; it is leucorrhea caused by onanism.*

(Microscopic examination of the stains on the chemise of the girl confirmed the truth of the preceding report.)

2d. The troubles caused by onanism mentioned thus far are of but slight importance compared with the following, the gravity of which is only too evident.

Let us mention, first of all, acute metritis.

Acute uterine inflammation is a not uncommon consequence of habitual masturbation, especially when the latter is practiced just before, during and immediately after menstruation.

"Besides, the physiological act, coitus, as a cause of endometritis," said A. Guerin in one of his clinical lectures, "we must mention a second, onanism. This is a common cause of inflammation and one to which attention has not been sufficiently called; it is a true mental disease, common to both sexes.

"Scanzoni tells us that this vice is so common in all the German boarding schools that the exceptions may be counted on the fingers.

"In boys it leads to the scrofulous and tubercular diatheses; in young girls it causes leucorrhea, anaemia and chlorosis.

"Vulvar pruritus is often the point of departure; some women give themselves up to masturbation with frenzy, suffer from it and become very unhappy.

"A young lady 27 or 28 years of age came one day to consult me for incipient nymphomania that was ruining her health. We tried all the anaphrodisiacs; camphor, lupulin, bromides, digitalis, etc., but without success.

"The torments of this unhappy girl were so great that she begged me to destroy the organ of sexual excitement. I consented and cauterized it, and for a fortnight she seemed cured; but when cicatization was complete it became evident that this method of cure, like all preceding ones, had failed. * * *

"When we consider the vascularity of the pelvic organs and their intimate connection it is easy to understand how any excitement, often repeated, of one point of the female genital apparatus reacts upon all the organs that compose it."

Parenchymatous metritis or chronic inflammatory engorgement of the uterine tissue may have masturbation for an efficient and active etiological factor, since repeated onanistic maneuvers cause an almost chronic congestion of the body and neck of the uterus.

Relaxation, prolapse and inversion of the vagina have been seen in onanistes.

Relaxation of the uterine ligaments often causes displacements and deviations of the womb and the dif-

*J. Briart et E. Charde, Manuel complet de médecine légale, pp 770-771.

ferent concomitant pathological phenomena.

Deslandes reports the case of a lady who, having commenced to masturbate at the age of 11 years, was afflicted with abundant leucorrhœal discharges; married at the age of 18, and, although legitimate enjoyment was not wanting, she continued her solitary practices in spite of several pregnancies. Her uterine trouble increased and was soon complicated with a prolapsus uteri, in which the uterine neck came down to the mouth of the vagina. (1)

Cullerier, in his "Dictionnaire des Sciences Médicales," says in so many words that uterine diseases are only too often the sad and cruel result of solitary maneuvers. (2)

Fabre, in his "Traité des Maladies Veneriennes," makes the following statement:

"I have seen vaginal discharges that have misled me as to their origin and caused me to think that they were of gonorrhœal nature. I was one day called to a lady, 18 years of age, who, six months after marriage, felt pain in her vagina and had an abundant greenish discharge."

Fabre's first thought was that she was suffering from a venereal affection and ordered treatment accordingly.

"Nevertheless, the trouble increased instead of diminishing. I now examined the patient thoroughly and found that the neck of the womb was down to the ostium vaginae. Questioning this lady as to what could possibly have caused such a relaxation of the uterine ligaments at her age, she acknowledged that her husband often excited her to pleasure with his fingers, and that the friction he exercised during the operation was so powerful that her chemise was often stained with blood. I then saw that I had been mistaken as to the character of her trouble, for I considered that the descent of the womb was caused by the masturbation, that was likewise responsible for the pain and the discharge."

(1) Loc. cit. pp 350-351.

(2) Vol. XIX, p 5.

I shall quote a second observation by the same author:

"A young woman, five years married and without children, had an abundant, greenish, vaginal discharge; she had grown quite thin, complained of terrific headaches and pain in her chest and stomach, and her hair had almost all fallen out."

Fabre thought that this case was a virulent affection, treated it accordingly and had no amelioration of symptoms.

"Finally, the patient, seeing that the remedies produced no result, confessed that she had, when 14 years of age, been taught masturbation by a chambermaid; that she had given herself up to it with such fervor that since her marriage the approach of her husband had been indifferent to her, while when in company she would sometimes be obliged to leave the room and satisfy her passions."

Onanistes are subject to metrorrhagia (1). These sanguine losses are explained in various ways. Sometimes they follow a congestion due to maneuvers repeated in quick succession; sometimes they are symptomatic of a want of plasticity of the blood, of anaemia; sometimes they are the sign of chronic endometritis, and, finally, much more often than we imagine, in adults, they accompany the expulsion of the germ—that is, to say, embryonic abortion.

Cancer of the womb, according to some authors, of whom I will cite Descuret, may be caused by onanism. I do not know how much truth there is in this statement, but it seems possible that this malady may have its development influenced by the congestion caused by frequent masturbation.

Enuesis nocturna is often caused by nervous atony and local weakness caused by masturbation. Giraudieu says: "I have often been consulted for incontinence of urine in young girls where masturbation was the whole cause of the trouble."

Circumscribed or general traumatic peritonitis has been caused more than once by perforation of the va-

(1) Journal de Médecine et de Chirurgie pratiques, Vol. XXVII, p 77.

gina by some instrument used for masturbation that has penetrated into the abdomen.

A woman, 28 years old, troubled, she said, by a difficulty in urinating, tried to pass a cedar pencil into the urethra. While doing this she was surprised by some one and the pencil slipped from her hands. A few moments later upon sitting down she felt a sharp pain in the left side of her abdomen, as if a foreign body had penetrated this region, and although a physician was called immediately he could find no trace of any wound. Frequent attacks of peritonitis followed, and eight months later the pencil was removed. The autopsy showed that the pencil had penetrated the abdomen, passing through both anterior and posterior walls of the vagina. (I)

Vaginal abscesses are caused by wounds or by the retention in the vagina of foreign bodies that may produce inflammation and perforation.

Some years since a peasant girl entered the hospital with a diffused swelling of the abdomen. Later on an abscess formed, opened and its long-continued suppuration carried off the patient.

The autopsy showed perforation of the vagina and the presence of a glass decanter stopper in the pelvis.

The physician in charge had forgotten to practice vaginal touch.

Cystitis and nephritis, according to Descuret, may be caused by masturbation.

Urinary calculi, vesico-vaginal fistulae and the consequences of these morbid conditions are far from rare occurrence in onanistes. Many unfortunate women have seen with shame and astonishment the most diverse instruments that they were using for erotic purposes slip from their fingers and enter the bladder to become the origin of all kinds of disorders.

Examples of this are only too numerous. Moreau, chief surgeon of the Hotel Dieu, says that he once extracted from a woman's bladder a crab apple encrusted with calcarious matter.

Benevoli reports the case of a young girl who introduced a wooden

needle case into the bladder through the urethra. It was extracted three months later and the patient got well (1).

A young girl, 16 years of age, was rubbing the meatus urinarius with the head of a long hair pin; having introduced it into the urethra it escaped into the bladder. * * * Some months later this unfortunate girl confessed the origin of her troubles. Sounding showed the presence of a stone in the bladder. This calculus was the size of a hen's egg and was crushed and extracted only after long and painful efforts. The pin, three inches long and incrusted with lime salts, was removed at the same time. The patient got well (2).

Foreign bodies introduced into the vagina by onanistes may cause severe or even mortal disorders. We have already mentioned in the course of this work the foreign bodies most generally used for vaginal masturbation and will now mention a few cases of more than ordinary interest.

A girl consulted a physician for a terrible pain in the genitals.

Digital examination revealed the presence of a hard, inert body at the upper part of the vagina; the mucous membrane was so swollen that it seemed to forcibly hold this unknown substance in its grasp.

Much care and more than one attempt was necessary to seize and remove what turned out to be—a champagne cork.

In spite of the denials of the patient, it was evident that the accident had happened while she was using the neck of a bottle to calm her passions (I).

Lisfranc reports a case of removal of a jelly glass from the vagina (II).

Dr. Janssens, of Ostende, had for a patient a woman who had used a beer glass for a phallus (III).

(2) Benevoli, *Dissertat et Observat*, Vol. XXII, p 204.

(2) *Journal de Medecine de Paris*, Vol. XL, p 229.

(1) Fournier et Beguin, *Dictionnaire*, Vol. XXXI, pp. 107-8.

(II) *Clinique chirurgicale de la Pitie*, Vol. II.

(III) *Journal de Medicine et de Chirurgie*, 1850.

Lisfranc loc. cit.) has the following:

"A woman was masturbating when unwell and broke a willow twig in the uterus. There were no symptoms.

"The uterus was doubtless accustomed to the contact of foreign bodies, but at the next menstrual epoch violent pains came on, which resembled those of child-birth; the womb had increased in volume.

"The external os seemed firm, the cervix was hypertrophied, as in the third month of pregnancy; at the lower extremity I felt a very slight projection that offered a great resistance. Examination with the speculum showed the foreign body that was removed with difficulty. Its displacement was followed by a discharge of thick black blood that had collected in the uterus. This organ immediately contracted to its normal size and all untoward symptoms ceased."

Syphilis may be transmitted by mutual onanism. This mode of propagation has been noticed in "special" hospitals, among others at Lourcine or Becquerel, where women exempt from this disease caught it through mutual masturbation with syphilitic companions.

To close this long list of local troubles I will add that sterility and abortions are very common in onanistes, because of the nervous shocks and afflux of blood to the uterus.

Finally, without speaking of the genital vice that they inherit, the children of onanistes are born weak, puny, die young or become neuro-pathic, rachitic, scrofulous, tuberculous, idiots or epileptics.

B. GENERAL TROUBLES.

Before commencing the enumeration of the general diseases which are caused either directly or indirectly by onanism, I wish to make a statement that will, I hope, guard me from being accused of exaggeration.

I do not intend to affirm that any or all of the affections I have already mentioned or have yet to mention must, necessarily, be the lot of every onaniste. Some by reason of age, temperament and lack of frequency

of these maneuvers may remain immune, while others may have one or several of the diseases mentioned in this chapter.

If the list seems long, do not accuse me of exaggeration. I have merely grouped the facts I have found in the writings of different authors, leaving out much that seemed irrelevant to the subject.

Nervous affections and troubles of the intellectual and moral faculties caused by masturbation are so numerous as to need to be mentioned only, without the addition of long commentaries; their genital pathogenesis is, however, very clear:

Epilepsy.—Many authors hold that in women this disease is intimately connected with uterine disorders hence the names "Epilepsia uterina" (Sennert) and of "Epilepsia ab utero" (Johnson), genital epilepsy, as it was formerly called. If this be the truth it is very easy to see how any excess of coitus or of masturbation may in time produce this morbid manifestation.

On the other hand, an epileptic attack aside from its duration has a great analogy with the venereal spasm; so much so that the ancients called it "Epilepsia brevis."

Finally, experience does not allow a doubt upon the influence of the genitals on the genesis of this sad infirmity.

It is a well-known fact that idiots, even if not epileptic, become so almost invariably. Is not masturbation the cause?

Hysteria.—The feminine trouble par excellence, hysteria, so common in girls and women, is said to have its point of origin in the uterus and its annexes by Tissot, Dubois d'Amiens, Landouzy, Brierre de Boismont, Morel, Wieger and Schutzenberger, etc.

S. believes with Romberg that hysteria is a reflex spasm produced by uterine excitation; other authors see in this disease only an idiopathic nervous affection. Such are Georget, Bouilland, Forget, etc.

Because of the appearance of hys-

(1) E. Landais, *De l'influence du mariage et de la grossesse sur les maladies*, p. 6.

teria subsequent to onanistic practices, I am inclined to favor the former theory.

I do not consider onanism as the only cause of hysteria, but as one of the principal ones. Almost every hysterical woman will, if deftly questioned, admit that the first painful or convulsive manifestations came on after masturbation.

Hysteria is more common in young girls, widows and old maids than in married women. Is not masturbation also?

Catalepsy, ecstasy, infantile ecclampsia, nervousness, chorea, encephalitis, softening of the brain, meningitis and, finally, paralysis may have their origin in onanistic practices.

The senses are not infrequently deranged in confirmed onanistes. Hearing is less acute, touch is less delicate, taste and smell are blunted, but the most important changes are those found in the organ of vision; asthenopia going on to amaurosis without the ophthalmoscope being able to discover any lesion to explain the loss of sight.

The intermittent mydriasis of the first stages of masturbation may become permanent.

The intellectual faculties.—It is easy to see how these become blunted through masturbation.

In children the most noticeable thing in the arrest in the development of the mental faculties, a state of things contrasting sharply with the former dispositions of the patient.

Onanism throws its victim into a kind of hebetude or even imbecility, through which a flash of intelli-

gence occasionally appears, but even this will soon vanish, leaving idiocy as permanent master of this human brain.

In people more advanced in life other mental diseases develop which hardly yield to the palm to idiocy; melancholia, hypochondria, lypemania, monomanias of different kinds, as homicidal, erotic, suicidal, etc., and terminating occasionally with dementia or general paralysis.

While the tastes, habits and character of our patients are changing, a skilled observer may easily notice a progressive weakening of the mental faculties. Slowness of thought, poor memory, even for important things; inco-ordination of ideas. All the sentiments are blunted, the instincts, even that of self-preservation, are perverted, lessened and annihilated. Such is dementia.

To a voracious appetite, common in the beginning of the affection, succeeds anorexia, the muscles become flaccid, the skin discolors and wrinkles, the eyes lose their brilliancy and become dull, and intellectual decadence complicates physical decrepitude.

General paralysis that so often complicates dementia may precede it or develop independently. It is characterized by progressive enfeeblement of the power of movement and stands in the same relation to it that dementia does to the power of intellection.

To this list of chronic diseases we must add one more: Imbecility, which may be considered as chronic dementia.

(To be continued.)





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THE THEORY OF PROFESSOR ROENTGEN.

It is the opinion of Professor Roentgen that there is some sort of relationship between the new X-rays and the ordinary light rays, since both cast shadows, produce fluorescence and exert chemical action. Roentgen's rays are not identical though they are associated with the cathode rays of Crookes. He has observed that in the passage through the air a smaller proportion of the X-rays than of cathode rays are absorbed.

Again, the direction of the latter can be changed by a magnet while the course of the former cannot. He believes, however, that the origin of the "X-rays," as he terms them, is at that portion of the walls of the tube where the cathode rays produce the most brilliant phosphorescence. Now, with a magnet, one can turn the cathode rays so that they will impinge on a different spot, and the X-rays will thus be generated in a new place. But wherever developed the latter proceed thereafter in a straight line, unaffected by a magnet.

The Professor believes that it is unnecessary to have the walls of the vacuum tube entirely of glass. The impact of the cathode rays on an aluminium plate or window at the end of the tube would be equally efficacious, in his opinion, in producing the newly found radiance.

Ultra violet rays can (1) be turned from their course if passed from air into water, or through carbon disulphide, aluminium, rock salt and some other substances; (2) they can be reflected at the surface of the bodies named; (3) they are subject to the laws of "polarization," and (4) their absorption by bodies through which they pass depends on the density of the latter. Elaborate experiments by Roentgen himself show that the X-rays behave in none of these ways.

It has long been known that aside from the transverse vibrations of light rays in ether, longitudinal vibrations are possible and, according to many physicists, they must occur; their existence, however, has not as yet been proven and consequently their properties have not been experimentally investigated.

While not as yet prepared to positively assert that the new rays have a longitudinal vibration, Professor Roentgen states that during the course of his investigation he is more and more inclined to accept this theory as the correct explanation of the phenomena observed, "but the hypothesis advanced still requires a more solid foundation."

The newly discovered rays seem to have the faculty of penetrating all bodies, though with a marked dif-

ference in the time and presumably in the strength of the rays required for penetrating different substances.

In none of the substances so far examined by Roentgen has there been shown any appreciable refraction or reflection of the rays, although the substances which are not completely permeable by these rays give a kind of diffuse reflection, such as is shown to light by a strong smoke or a heavy fog.

Edison is endeavoring to get a shadowgraph of the human brain and is also particularly interested over the possibility of using the X-rays to combat disease germs. When he gets his apparatus in perfect working order, he will experiment on cultures. A peculiar phenome-

non observed in experimenting with the cathode rays is the effect they have upon aluminium. The electrodes, that is the cathode and anode in the tubes, are made of aluminium discs, one inch in diameter and one sixty-fourth in thickness. Before they had been used in the tube they were easily bent. After several of them had been used recently. Mr. Edison happened to try to bend one. He found that it resisted all but the most violent effort. Then he tried one after the other, and in each he observed the same inflexibility. This has never been observed before by any scientist, Mr. Edison says. He attributes it to the effect of high heat and the current passing through the metal.

A CAUSE OF PUERPERAL FEVER.

Dr. William E. Ground, of Superior, Wis., in the Transactions of the Medical Society of that State, criticises, among other things, the conditions surrounding the women of the middle and lower classes. He states that the husband, as a factor in the production of puerperal sepsis, has not received the consideration he deserves. He often initiates the septic process in his wife soon after marriage by inoculating her with the gonococcus, and when she is near the end of pregnancy he comes home with a soft chancre, and continues his septic and sexual relations with her. Most men touch their penis several times a day while urinating, and yet probably few of them ever think of washing it, no matter how dirty their occupations, before thrusting it into the parturient canal at night. Men sometimes have sexual relations with their wives within a week or two after confinement; the woman develops symptoms of puerperal fever, and the doctor is puzzled to explain the cause, and perhaps lays it to the breasts, or

catching cold, or to auto-infection.

The patient does not have many opportunities for infecting herself, but the methods she employs are calculated to be very successful. Most women think any old rags are good enough to receive the lochial discharge, and they must be prohibited from doing. She must also be discouraged from using the family sponge to bathe herself with. The surgeon would do well if he ordered all wash rags and sponges used for such purposes burned before labor begins, for they will turn up unexpectedly a dozen times during the confinement unless they are entirely out of reach. Only recently he had prepared a parturient woman in a thoroughly aseptic manner, when she found it necessary to visit the closet and while there the waters broke and began dribbling away, when she promptly applied the bath room sponge to the vulva, where he found it an hour later. These may seem to be little things, but if we expect to do aseptic surgery and get desirable results we must be eternally vigilant.

CORNELIUS G. COMEGYS, M. D.

Dr. Cornelius G. Comegys, one of Cincinnati's prominent physicians, died February 10.

Dr. Comegys was born in Cherbourg, Kent County, Delaware, July 23, 1816, and was educated at Dover Academy, Delaware. After embarking unsuccessfully in business in Indiana, he began the study of medicine, and received his diploma from the University of Pennsylvania in 1848. He went to Cincinnati the following year, and in 1851 studied in London and Paris. He became professor of anatomy in the Cincinnati College of Medicine in 1852, but resigned to accept the chair of the institutes of medicine in the new Miami Medical College at Oxford, O.

This was united with the Medical College of Ohio in 1857, and Dr. Comegys retained his chair till 1868, with the exception of the years 1860-4. In 1857 he became lecturer on clinical medicine in the Cincinnati Hospital, where he has introduced important improvements.

Dr. Comegys delivered an address before the Alumni Association of the

University of Pennsylvania in 1875, in which he maintained that a healthy brain was necessary to a free will. He was in favor of reform in medical teaching, holding that instruction in hospital wards should be given to advanced students, and that instruction given to large classes by means of lectures was inadequate.

For many years Dr. Comegys was a director of the Board of Education, was active in developing the Cincinnati Public Library, secured the organization of the University of Cincinnati in 1869, and was one of the founders of the Cincinnati Academy of Medicine and its president. Dr. Comegys claims to have been the first to announce the correct theory of counter-irritation.

Of his numerous medical papers, two have attracted much attention, that on "The Pathology and Treatment of Phthisis," and that on "Cool Bathing in the Treatment of Enterocolitis." He also translated from the French Renouard's "History of Medicine."

ANNOUNCEMENT.

The next issue of this journal will contain important papers on the Poisonous Effects of Illuminating Gas, by Boston physicians, one of whom is a Medical Examiner. As this subject

is one that is rarely treated, outside the text-books, in medical literature, we believe that the general practitioner will find these papers of great interest and value.—[Ed.]





A PRACTICAL METHOD OF MEASURING AND REGISTERING THE
TRUE THERAPEUTIC DOSE OF INDUCTION-COIL
CURRENTS.

By S. H. Monell, M. D., 865 Union St., Brooklyn, N. Y.

(Continued from Last Number.)

Before describing further the details of my method, it is proper to cite the authority for the electrical measurements which constitute the scientific basis of accuracy claimed by me above:

"New York, Dec. 17, 1894.

"Dr. S. H. Monell.—Dear Sir: I return herewith the two tubes containing liquid resistances which you submitted to me. I have calibrated each tube and provided it with a scale which shows its electrical resistance in ohms for every position of the movable electrode. My opinion in regard to these devices is as follows: 1. A liquid resistance is a very simple and convenient means of obtaining very high resistance for medical use. 2. By changing the liquid the range of resistance may be varied from several megohms to a fraction of an ohm. 3. The screw adjustment of the electrode enables the resistance to be gradually varied to any value, without the sudden shock which occurs when resistance coils are cut out. 4. The resistance is non-inductive, hence there is no reaction against or distortion of the current, which is very important in connection with induction (faradic) coils. 5. A short circuit cannot occur, the electrodes being arranged

so that it is impossible for them to come in contact, whereas there is serious danger of short circuit in resistance coils with high tension currents. 6. The resistance is practically definite and constant, provided the temperature remains nearly the same. With the small currents ordinarily used the heating effect is small, but if necessary the temperature can be tested by a small thermometer and kept constant or allowed for. 7. The effects of polarization and electrolysis are insignificant, since the potential is high and the current is alternating in the case of induction-coils, with which these resistances are to be used. 8. The liquid does not appear to be affected by the action, or to change in any way, but it is of course impossible without actual trial to tell what effect might occur in a long period of time. Any difficulty of this kind might be overcome by renewing the liquid occasionally.

"Yours truly,

"F. B. CROCKER,
"Professor of Electrical Engineering,
"Columbia College."

While therefore the once proposed scale of fractions of inches was a purely fictitious and ridiculous trav-

esty upon scientific dose-measurement, the author's method is a comparative record of the current strength and not a mere fragment of a tailor's yard-stick. As such a resistance register and rheostat is of general applicability, and may be placed by all instrument-makers upon high-grade batteries and properly standardized for clinical use, it may be fairly claimed that the general adoption of my method would supply the long-expressed need for precision in faradic dose records.

To illustrate the method let us hold, for example, two ordinary electrodes in the hands, select for our coil one thousand five hundred yards of No. 36 wire, and employ very slow interruptions of, say, seventy per minute. We raise the rod in tube 1 to its full height and switch four cells into circuit. Gradually lowering the contact rod, we note the point where the current becomes first perceptible to sensation. It is at 700,000 ohms resistance on the scale. Taking this as our zero unit, we continue to lower the rod until muscular contractions are produced as strong as we desire. The rheostat now indicates but 100,000 ohms, showing that 600,000 ohms of resistance have been removed from the passage of the current into our arm muscles, which feel and respond to the force previously expended within the rheostat. If now I record the facts: Coil, 1500 yards of No. 36 wire. Interruptions, 70. E. M. F., four cells. Dose, 600,000 ohms, small sponge electrodes in hands, positive in right; I can repeat the exact application and muscular effect whenever and as often as wished, even should the cells deteriorate by use so as to require five or six cells to equal the energy recorded. There is no parallel to this precision of record to be found in the literature of faradic electricity. The method allows for all possible variations in treatment.

Again, using a short, coarse coil, one hundred and fifty-four yards of No. 21 wire, for instance, we obtain sensation with a given contact at 36,000 ohms resistance of tube 2; and full tolerance is reached when but

4000 ohms remain. The given dose is therefore the electrical energy represented in overcoming 32,000 ohms of resistance with the current quantity value indicated by the capacity of the wire in the induction-coil. It is not essential to know the galvanic amperage of different sizes of wire with a corresponding voltage, for we are not dealing with galvanic but with induced currents, in which volume is subordinate to potential and kinetic energy; and our different coils—long, medium, short, fine and coarse—take on a definite individual identity under habitual use which serves the expert as a practical expression of their quantity values. Our second record reads with electrodes same as before, but a more rapid rate: Coil, 154 yards No. 21; frequency, 300; cells, two; dose, 32,00 ohms.

In the last case the lower voltage is seen to be commensurate with the greater volume conducted by the coarse wire, while the previous high voltage of the long fine-wire current was proportioned to the extremely diminished volume induced through it.

In making a vaginal bipolar application with a very rapidly interrupted high-tension sedative current, we use tube 2, with its low resistance, owing to the enormous tolerance of the tissues treated.

An illustrative clinical record reads as follows: Vag. bipolar sedation, coil, 1500, No. 36. Rapid vibrator, E. M. F., 4 cells. Dose, 45,000 ohms, twenty minutes, daily.

If this seems to express a small dose (an inadequate estimate of the great tolerance of the pelvic tissues), it must be remembered that it is the difference between zero sensation and the maximum current strength administered with electrodes applied in actual treatment, which is recorded as the dose, and not the difference between the sensitive nerve-filaments of the hand and tissues whose dullness of sensation and low resistance to current diffusion permits them to accept with comfort and benefit an application which would be painful on the surface of the skin. If the

dose was reckoned from a zero obtained in one arbitrary manner, say, by touching the electrodes with the finger or thumb before applying them to the patient, it would bear no genuine relation to the dosage of larger contact areas, of different varieties of electrodes and different parts of the body.

To be a scientific and universal method it must answer for all conditions of treatment, and my method does this perfectly. The use of a single cell, or of any number up to six (the battery contains six cells), will determine the zero at a higher or lower point on the scale, and the same cells, as they deteriorate, in time will alter their E. M. F.; but these variations do not alter the accuracy of my dose record, which is the difference between the minimum and maximum rheostat readings independent of the number of cells it takes to furnish the given inductive force.

The difference, also, in power to penetrate tissue resistance will create a different zero point for each length and size of wire, even with the same E. M. F. inducing force and same electrodes; but with standard coils, a standard method of finding the actual zero point in all cases, with any coil, with any number of the battery cells at any period of their life, my method furnishes a flexible, permanent, and accurate measurement of the true therapeutic dose. Its adaptability to varying conditions of current volume, voltage, resistance and density removes all sources of error.

This method, carried out in its fullest detail, is particularly applicable to the records of clinicians and other observers whose investigations require an exact comparison of results. In general practice the physician will soon familiarize himself, at least approximately, with the position of the rheostat for various zero readings, just as the skilled book-keeper soon remembers the ledger pages of his accounts; so that actual tests for zero will be unnecessary except, perhaps, in the first treatment of a new case. If the full dose record

is considered superfluous for the physician's own records in his ordinary office work, a modification will furnish satisfactory notes for personal reference. In using the modified method which I suggest, we need not repeatedly calculate the actual dose administered, but simply note the conditions under which the maximum current was applied by recording the lowest reading of the scale. For example: Coil, 1000, No. 36. Rapid V.; cells 5; scale 6000; tube 2; vag. bipolar, 20 minutes. There is no expert electro-therapeutist equipped with similar apparatus who, on reading this record, could not instantly apply the same treatment with the same dose, though he were a thousand miles away. The use of initials for full words will, of course, abbreviate the record in our private case-books and be equally intelligible to our understanding.

My resistance scales, therefore, clearly supply to induced currents a dose indicator as practical in their case as the milliammeter is in the case of direct currents, and complete the hitherto imperfect record of faradic administrations. Of the other factors requiring report for purposes of uniformity in clinical observations, the character of the electrodes can always be identified by sizes, numbers, or names, as in makers' catalogues. Quantity and quality, the elements of induced currents subordinate to their energy and pressure force, are, as we have seen, sufficiently expressed by reference to the particular coil employed. A more exact description will hardly be required by experts in electro-therapy. As the trained electrician becomes accustomed to the quantitative and qualitative differences in effect between every coil in his apparatus, whether 500, 1000, or 1500 yards of No. 36 wire, or 800 or 500 yards of No. 32 wire, down to shorter coils of No. 21 or 18 size, he accurately knows the characteristics of currents from them all, and utilizes their diverse properties with intelligence and precision.

It would add no therapeutic value to his knowledge if the current volume, per wire, was noted by a meter

in terms of amperage, or the E. M. F. in volts.

There now remains but one factor of dosage still surrounded by vagueness and lack of precision in theory, although clearly defined enough for practical purposes. This relates to the record of the rate of current interruption, a very important part of the matter indeed. Very low rates (50 to 300) can, however, be stated in comparative figures, while very rapid interruption does not require a numerical term to express its frequency. Speed, as stated in mere figures per minute, is so involved with other qualities of adjustment, evenness, constancy, length of period, etc., that the advantage of a mathematical record can be greatly overestimated.

I have referred to this in other of my writing, and it is out of place to dwell on this point at present, though it is one of peculiar interest. A closely related feature, however, may claim our attention briefly.

It is the ideal of some who have sought to define faradic dosage by rate of interruption, and who have devoted much time and special thought to the improvement of faradic apparatus, to construct an independent interrupter, actuated by a current separate from that which supplies the inducing force.

The reason for this lies in the fact that every change in the regulation of current strength made in the primary circuit varies the rate and force of the interrupter in instruments as generally made. A prominent writer has ably argued the advantages of such a method, and states that it can be adapted to every kind of contact-breaker, the motor power for the rheotome being furnished by a single separate cell. The importance of steadfast E. M. F. and unvarying evenness of interruption throughout all gradations of the induced current strength is so great, so essential to the satisfactory employment of faradic electricity, that no battery not providing for independent secondary current control can be considered as representing the advanced progress of to-day.

Manufacturers of medical batteries, however, do not all agree with the writer who advocates the separate cell for the interrupter, and are well-nigh unanimous in declaring that the mechanical obstacles to the device are insurmountable in practice. The theory is correct, but makers have failed to apply it successfully to the spring vibrators in common use. My apparatus easily surmounts the difficulty; furnishing not alone one cell to actuate the break-piece, but places six at our disposal at will, as independently as any theorist could desire. My former article describing the improved induction apparatus designed by me referred to this feature at some length, but I wish to emphasize again the far-reaching importance of the secondary rheostats which accomplish this purpose in my battery, and to state further that, were their usefulness and influence restricted to mere regulation of induced current strength, without jarring or irregularity, or change in the primary flow, the advantage they would thus contribute to clinical handling of both patient and battery would alone stamp this apparatus as without an equal in therapeutic convenience and capabilities. That beyond this these rheostats make possible a practical dose record is proof of their fundamental necessity to a perfect instrument. If still unconvinced that they are indispensable, let us attempt to adjust a slowly interrupted induced current—say fifty periods per minute—to a dosage of strength sufficient to produce powerful but painless, rhythmic, and non-tiring contractions of certain arm muscles, with a gradual and even decrease to scarcely perceptible sensation. With the ordinary interrupter, sliding coil, or primary rheostat, it cannot be done, even with the costliest appliance in the market. With my apparatus it is done instantly and with the most striking success. As an object lesson in the inadequacy of old methods of current regulation, and of the superior efficiency of my secondary rheostats, it leaves nothing open for argument. Professor Crocker's letter appreciatively sums up the rest.

TREATMENT OF OZENA BY INTERSTITIAL ELECTROLYSIS.—DR. CHEVAL.

TRANSLATED BY DR. CHANDLER.

It is now three years since we commenced treating our different cases of ozena by cupric electrolysis. We wish to insist only upon those facts which are proven. Some of our patients, who have been cured, remain under regular, periodical observation; there has been no relapse for months, and, in some of the first cases cured, for over three years. We think that no one can accuse us of precipitation in announcing a method of cure for so intractable a disease as ozena.

For interstitial electrolysis are needed:

1. A source of constant electric energy.
2. A milliampere metre that has been tested.
3. A rheostat.
4. Needles isolated by a bit of rubber drainage tube.

A needle of silver or copper is inserted into the mucosa of the middle turbinated bone, through the bone itself or else into its concave surface, which is usually the one affected. A steel needle in the mucosa of the inferior turbinated bone of the same side, placed as nearly as possible between the mucosa and the osseous substance, and extending the whole length of the bone itself, completes the circuit. In those cases where there is a deviation of the septum we insert our negative needle there.

The nostrils to be operated upon are rendered anesthetic with cocaine, and, as far as possible, aseptic; the needles are made aseptic by heat; the insertion of the needles and the passage of the electric current are both, in the great majority of cases, painless.

Some patients, however, complain of true hemicrania, or of a dull pain behind the eye, between the eyes, or at the nape of the neck; this may cause congestion of the conjunctiva and lacrymation. These symptoms may persist for several days. In most cases there is no appreciable trouble, but a sense of well-being comes on after the first few days, and with this, as a first symptom, the disappearance of the stench. Rhinoscopic examination shows the entire mucosa of the middle turbinated bone covered with a bluish green layer and the eschar of the lower turbinated bone does not extend to the mucosa. Repair is complete in from 12 to 15 days.

After cure, in recent cases, the mucosa regains all its characteristics; in severe cases a certain amount of atrophy persists. It seems incontestable that interstitial electrolysis instead of causing atrophy brings about a regeneration of the atrophied mucosa. There were 91 per cent. of cures.

—Revue International de l'electrotherapie.



Book Reviews.

THE MEDICAL MUSE, GRAVE AND GAY. Collected and arranged by John F. B. Lillard. Published by I. E. Booth. New York.

If one can overlook the many typographical errors, to say nothing of the grammatical ones, he may enjoy this collection of jokes on the medical man, for there are some very good extracts in it for light reading. We believe, however, that the author makes a mistake in the poor excuse he offers for producing his collection, as indicated by the closing paragraph of his preface, when he states that, "as the busy practitioner has no hour of leisure, he presents it as a solace for the time between the call of the last patient and the next ring of the door-bell." If there is any such interval to the "busy practitioner" it should be improved by study. If the doctor has spare time he may amuse himself.

As ludicrous a paragraph as occurs in the whole book is the ungrammatical expression of the first paragraph of the author's preface, which runs as follows: "There is not, so far as the compiler is aware of, any collection of medical poems in the English language yet been published." Such mistakes occur from a carelessness in separating a main verb too far from its auxiliary.

THE FUNCTIONAL EXAMINATION OF THE EYE.—By J. Herbert Claiborne, Jr., M. D., Adjunct Professor of Ophthalmology in the N. Y. Polyclinic; Instructor in Ophthalmology College of Physicians and Surgeons, N. Y.; Assistant Surgeon to the New Amsterdam Eye and Ear Hospital; Author of "Theory and Practice of the Ophthalmoscope." 100 pages, With 21 Illustrations.

The writer has had many calls for

a book that will give in the simplest form the successive steps to be taken in the examination of the eye for spectacles, and has contemplated writing such a book for the use of the beginner, that will not confuse his mind, as the larger works on refraction are extremely liable to do. This little work stands alone in bringing the subject to the comprehension of one just starting in the study of refraction. It will save him much valuable time in arranging in his mind what he might pick up from time to time clinically, for here it is all arranged in proper order. We apprehend that this book will have a large sale, as it ought to have.

J. A. T.

COLOR-VISION AND COLOR-BLINDNESS. A Practical Manual for Railroad Surgeons. By J. Ellis Jennings, M. D. St. Louis. Illustrated with One Colored Full-Page Plate and Twenty-One Photo-Engravings. Crown Octavo, 110 pages. Cloth, \$1.00 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

In this book of 110 pages the author has condensed the essentials of what is known relative to color-blindness. After giving the physiological anatomy of the retina, and the physics of light, he proceeds to discuss the different theories of color-perception and color-blindness, both inherited and acquired, closing with a description of the different tests for the defect that have been devised by Holmgren, Thomson, Oliver and the author himself. The student will get a very good idea of the whole subject by perusing this little book, which has been made attractive to the eye of the reader by the publishers in typography and illustration.

J. A. T.

The Medical Council is the name of a new addition to the already long list of monthly medical periodicals. It is edited by Dr. J. J. Taylor, of the Medical World, of Philadelphia. Its purposes are to educate the general practitioner in the special branches of gynecology, obstetrics, diseases of children and stiriculture, as stated in its editorial pages. It has some unique and excellent features, and resembles in its general make-up the Medical World. We note among its pages the following little parody from the pen of our Dr. Lewis:

"STIRRUPICULTURE."

A horse "race" resembles the great "race" of man,

Tho' the simile's force is diminished,

For the man's "race" is naught but a "cell" at the start,
While the other's a "sell" at the finish.

Moreover, in the case of the "race" of the horse,

It's "over" as soon as he wins it;
Whereas in the case of the "race" of the man,
It's "ova" before he begins it.
Then let us be cautious, and wisely remember,

While patiently waiting the issue,
That horse "sells" are naught but a tissue of lies,
And man "cells" allies of a tissue.

BOOKS AND PAMPHLETS RECEIVED.

THOROUGHNESS IN MEDICAL EDUCATION. By Hunter Robb, M. D. Reprint from Western Reserve Medical Journal, December, 1895.

THE ETIOLOGY, PATHOLOGY, AND TREATMENT OF INTESTINAL FISTULA AND ARTIFICIAL ANUS. By N. Senn, M. D., Ph. D., LL. D. Reprinted from The American Journal of Obstetrics.

THE EARLY RECOGNITION OF CARCINOMA OF THE CERVIX. By Hunter Robb, M. D. Reprinted from the American Gynecological and Obstetrical Journal.

CONSERVATIVE SURGERY ON THE BATTLEFIELD AND FIRST AID TO THE WOUNDED. By N. Senn, M. D., Ph. D., LL. D. Reprinted from the Journal of the American Medical Association.

THE EARLY HISTORY OF VAGINAL HYSTERECTOMY. Delivered before the Chicago Medical Society, March 18, 1895. By N.

Senn, M. D., Ph. D., LL. D. Reprinted from the Journal of the American Medical Association.

THE TREATMENT OF MALIGNANT TUMORS BY THE TOXINS OF THE STREPTOCOCCUS OF ERYSIPELAS. By N. Senn, M. D., Ph. D., LL. D. Reprinted from the Journal of the American Medical Association.

METATARSALGIA, (MORTON'S PAINFUL AFFECTION OF THE FOOT): ITS CAUSES, SYMPTOMS, AND TREATMENT; WITH ILLUSTRATIVE CASES AND BIBLIOGRAPHY. By Thomas S. K. Morton, M. D. Reprinted from the Transactions of the Philadelphia Academy of Surgery. Meeting of March 6, 1893.

BIO-CHEMISTRY IN ITS RELATIONS TO NERVOUS DISEASES. By G. W. McCaskey, A. M., M. D. Reprint from American Medico-Surgical Bulletin.

PRACTICAL URETHROSCOPY. By H. R. Wossidlo, M. D., Berlin,

Germany. Reprinted from the Medical Record, September 7, 1895.

THE KINETIC AND THERAPEUTIC ENERGY OF DRUGS. By J. W. McLaughlin, M. D. A Theoretic Explanation of the Causes of Drug Energy, and the Rationale of its Action on the Living Tissue—Elements of the Body.

EXCISION OF THE COCCYX FOR CONSTANT PAIN RESULTING FROM AN UNUNITED FRACTURE. By Lewis H. Adler, Jr., M. D., of Philadelphia. Reprinted from the Medical News, September 28, 1895.

ELECTRIC LIGHT BUG; OR BEL-

OSTOMA. By Theodore William Schaefer, M. D., Kansas City, Mo. Reprinted from the Medical Index.

ELECTRICITY IN THE TREATMENT OF EXOPHTHALMIC GOITRE. By Robert Newman, M. D. Reprinted from the Journal of the American Medical Association, December 7, 1895.

SUPPLEMENTARY REPORT ON

THE SUCCESS OF ELECTROLYSIS IN THE TREATMENT OF URETHRAL STRICTURES. By Robert Newman, M. D., New York. Reprinted from the Journal of the American Medical Association, May 25, 1895.



Correspondence.

WAYSIDE NOTES.

BY ERNEST B. SANGREE, A. M.,
M. D.

Probably the most literal possible interpretation of the old adage about killing with kindness occurred the other day in connection with the sudden and unfortunate death of Dr. Goodman. It belongs to a type of incident that happens only too frequently, and it seems a great pity that when a man suddenly falls in this way the bystanders do not know enough to do the best thing possible, and that is—nothing.

Dr. Goodman, seeing a train pull out of a suburban station and mistakenly thinking it his own, succeeded by running in reaching the last car, mounted a step or two and then fell prone on the platform. Several well-meaning passengers lifted him up and supported him inside the car to a seat; here he sat helplessly for about two minutes and then fell forward dead.

The explanation, of course, is simple; the exertion of running for the train was too much for the endurance of a heart that was long since known to be diseased. When he fell on the platform his heart had not stopped, but was doubtless either fluttering or beating weakly and spasmodically. Had he been allowed to lie flat on the floor, the easiest position for the heart's work, it is possible that in a few minutes it once more would have regained enough strength to perform its wonted duties. Indeed, from the fact that he lived several minutes after he first fell, I think it not only possible, but probable. But he was picked up, sat upon a seat, and now the extra work imposed upon the heart in that position was just the additional straw wanted to a load that was already more than that organ could bear.



Current Medical Literature.

UROTROPIN.

BY J. A. FLEXNER, M. D.

The favorable reports that have come to my notice regarding Urotropin lead me to think that some additional facts concerning it may not be amiss. Urotropin is a derivative of formic aldehyde, and not a coal-tar product. The well-known antiseptic and preservative power of formic aldehyde in solution led Nicolaier, of Gottingen, to use the solution of formic aldehyde, containing 40 per cent. of the gas, and known as formalin, as a means of preserving specimens of urine from decomposition pending examination. He noticed that neither uric acid nor the amorphous urates were deposited, though the same specimens not treated with formalin deposited either or both, as the case might be. Even when already precipitated, these substances underwent solution when formic aldehyde was added to the specimen. Urines that readily deposited large amounts of uric acid when acidulated with a mineral acid, did not do so when a sufficient amount of the preservative was added.

The results of these investigations prove very conclusively the great uric acid solvent power of formalin. The reputation of the lithium salts as uric acid solvents is caused by the common error of applying the results of laboratory experiments to practical therapeutics. The fact that lithium forms an insoluble phosphate, and that the blood and urine contain considerable amounts of soluble phosphates, show that lithium salts, given by the mouth, must form insoluble phosphates of lithium long before they can combine with the uric acid. In this respect it is no exception to the chemical law that when the ingredients for the formation of an insoluble body are present in a

mixture, this body will always be formed. Medical opinion has for a long time attributed the success attending the use of the lithiated waters to the water, and not to the lithium that they contain. A similar error obtains in the case of some more recently introduced substances, lyctitol, lysidin, etc. They do not, in the urine, form the very soluble uric acid combinations that they do outside the body. Formic aldehyde being too irritating to be taken internally, Nicolaier then determined to try its amine combination as a substitute. This substance, hexamethylenetetramin or Urotropin, is non-poisonous even in considerable quantities, is unirritating, very soluble in water, and is as good a uric acid as formic aldehyde itself.

The name Urotropin was given to it on account of the changes which its administration brought about in the urine. Alkaline and putrid urines, containing mucous in excess, pus and pus organisms, uric acid or amorphous urates, were rapidly restored to a normal appearance and an acid reaction. The urine was sterilized, and increased in quantity, and calculi and deposits were dissolved. Hence Urotropin is a most valuable resource in all suppurations of the urinary tract, and in all gouty and rheumatic conditions where an active eliminant of uric acid and its salts is indicated. A further valuable property of Urotropin is its faculty of combining readily with salicylic acid and forming a soluble combination. A solution containing from ten to fifteen grains each of Urotropin and salicylic acid to the fluid ounce of water or other suitable vehicle has the further advantage over the salicylates alone in that its taste is not disagreeable. It appears to be

far less irritant to the gastric mucous membrane than solutions of salicylic acid usually are, and the combination promises to have a wide range of therapeutic usefulness.

From the American Practitioner and News.

During the discussion which followed the reading of a paper on "Chronic Lithemia, With a Consideration of Various Uric Acid Solvents," by J. W. Irwin, M. D., of Louisville, Ky., before the Louisville Clinical Society, Dr. I. N. Bloom said:

"Concerning solvents of urates or uric acid, I just finished the treatment of a case yesterday which came to me two weeks ago, in which I tried Urotropin; the patient was referred to me by Dr. Scott. The specific gravity of the urine was .1030, free from albumen and sugar, but a large quantity of uric acid was present; the urine was highly colored, the coloring matter being decidedly increased. I gave him Urotropin in five-grain doses four times a day, and in three days the urine had become perfectly clear, there was no deposit at all, and the patient was discharged yesterday.

"This is the only case in which I have used Urotropin, and simply wish to add it to the other solvents."

Dr. Wm. Cheatham stated:

"I have used Urotropin in several cases with good results. These were cases of asthenopia found to be due to the uric acid diathesis, there being general rheumatic symptoms. In giving Urotropin I combine it with salicylic acid. I give two drachms of Urotropin and one drachm of salicylic acid in eight ounces of water, a tablespoonful at a dose. This would make the quantity of Urotropin taken at a dose about eight grains."—The American Therapist, New York, January, 1896.

CHURCH CATARRH.

Referring to a paragraph which recently appeared on this subject in the British Medical Journal, a correspondent in the Standard calls attention to the absence of a cloak room as one of the contributory causes of illness in those who attend places

of worship. We merely drew attention to one matter pertaining to the church itself, and we by no means suggested that many other conditions might not work in the same direction. There can, we think, be little doubt that there are many evils connected with the too common practice of importing into the sacred edifice wet or snow-laden overshoes, capes, and mackintoshes, and even umbrellas, to exhale during the service a "pestiferous moisture in immediate proximity to the worshippers and to render the genital atmosphere additionally retentive of the morbid effluvia of a congress of animals," as described in the Standard. The art of making churches comfortable, and providing for their frequenters those luxuries which are taken for granted at all other places of public resort, except perhaps political meetings, is in a somewhat backward state, and in many such matters there is a good opening for reform. We have not yet heard it put forward that church going is regarded by church teachers as a matter of penance, and even if it were, it might be whispered that the artifice attributed to the monks of old of boiling the peas with which on days of pilgrimage their shoes were stuffed, is not unworthy of imitation, and that comfort even in well-doing is not to be despised.

ENDOCARDITIS.

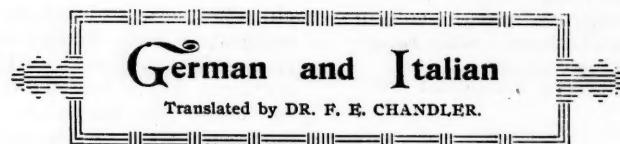
As soon as the heart-sounds in acute articular rheumatism begin to grow muffled, or a bruit is detected, give in addition to the salicylate, iodide of potassium 0.60 centigram three times daily. Also flying blisters over the apex and along the course of the fourth, fifth and sixth intercostal nerves.

Caton Sem. Med.

CHLOROSIS.

In true idiopathic chlorosis, where iron is ineffectual, sulphur will produce a marked amelioration. After using sulphur, iron can again be resorted to, and it becomes very beneficial.

Schultz, London Med. Times.



MOELLER'S DISEASE IN CHILDREN.

After a short resume of the discovery and history of this disease, the author says: "The children afflicted with Moeller's disease are usually under one year old, rarely more than two. The status of their parents is usually modest, but this disease has been seen in the children of the rich. Symptoms of rachitis are often present, but rarely in its worst forms; it is in the minority of cases only that these symptoms seem to be wanting. The disease usually breaks out in the cold season. It commences suddenly with restlessness and malaise. A very characteristic and well-marked symptom makes its appearance early—the tenderness and swelling of several points in the continuity of the long bones. The affected extremity is more or less immobile (pseudo-paralysis). The swelling is deeply seated—in the periosteum or below it.

It may correspond to the epiphysis or to the diaphysis, and occasionally may extend over the entire bone. As the tumor increases, the fleshy parts become firmer and the stretched skin may be discolored, but generally is unchanged.

Pressure with the finger usually leaves a slight trace.

In certain cases, not always in the most serious ones, there may be a separation of the epiphysis in several places.

It is only exceptionally that bones other than the long ones are affected. To this state of things is often added a bluish swelling of the gums around those teeth which are through or on the point of piercing.

Occasionally, a swelling similar to

that of the long bones comes on the upper jaw. Often there are profuse sweats, sometimes also viscous and bloody diarrhea; rarely, vomiting. There is loss of appetite; the color of the skin grayish; nervous symptoms are moroseness and insomnia. Finally, in very serious cases, there is a tendency to extravasation of blood; petechiae, sanguinations of the skin, nose bleed.

The disease may last six to eight weeks, or even months. Remissions alternate with exacerbations. Symptoms of a hemorrhagic diathesis are of bad augury; if these are wanting then recovery is usual. Return to health should be aided by general sanitary measures—fresh air, sunlight, good food. Some specialists attribute great importance to an antiscorbutic treatment.

This schema varies according to the severity of the disease; but all forms have the following symptoms in common: The disease makes its appearance when the child is between six and twenty-four months old; swelling firm and painful on pressure; single or multiple swelling, corresponding always to the long bones.

Other symptoms, as those of rachitis and the swelling of the gums, may be wanting. Two important negative signs are as follows: 1. Pus has never been found in the swelling, always blood. 2. No articulations are affected by the process.

The author adduces ten personal observations, and declares that, in his opinion, Moeller's disease has absolutely no connection with scurvy.

—Dr. Hirschsprung.—Hospitalstidende.

NEW METHOD OF CURING UMBILICAL HERNIA AND EVENTRATION.

In the last reunion of the Polish surgeons, in Cracow, Dr. Volkowitch showed the following procedure: For the cure of umbilical hernia he uncovers the internal portion of the two rectus muscles; he next cuts them and rejoins them in such a way that they cross each other.

To remedy eventration the author proposes shortening and crossing of the *liniae albae* of the recti. In this way both the transverse and longitudinal dimensions of the abdominal wall are shortened. To prevent hernia and eventration following operations upon the abdominal cavity, Volkowitch proposes to make the cut, not through the linea alba, but across one of the recti, for the reason that a muscular cicatrix is far more solid than one of the connective tissue.

—*Kronika Lekarska.*

A CASE OF HYSTERIA IN THE MALE.

Dr. O. Magalhaes reports an interesting case of hysteria in the male, with hemiplegia and hemianesthesia of the right side. A delineation of the retinal image accompanies the work.

A sensible amelioration of all the symptoms followed psychotherapeutic treatment.

—*Ann. de Sociedade de Med. e Cirurg. da Bahia.*

A CASE OF EPISPADIAS.

Dr. F. Kornfeld reports a case of this curious genital anomaly that he observed in a waiter, twenty-six years of age:

Two cuts that accompany the text contribute to a better understanding of the case.

The sheath of the penis is well developed and of normal length, but is so placed around its axis that the dorsal fissure, instead of being on top is to the left. This torsion is caused by the unequal insertion of the corpora cavernosa.

The patient, who came to Dr. Fritsch's clinic, on account of an acute gonorrhea, says that he has

been aware of his deformity since childhood, but no one of his family had been similarly affected. He also says that during erection his penis is deviated somewhat towards the left groin; that the genital and vesical functions are performed easily, and that he had his first gonorrhea at the age of 19.

The author goes into details of the case, which is especially interesting on account of the non-cleavage of the prepuce.

—*Wiener Med. Wochenschrift.*

TROPHIC TROUBLES IN BLENNORRHAGIA.

The case referred to is extremely interesting because of the pathogenic queries it contains.

The toes of the patient were bristling with actual horns. Horny growths extended over the external and internal borders of both feet. The plantar region is covered with a horny sole, about one centimetre in thickness and extending over nearly the whole plantar surface. The free extremity of most of the toes is sheathed in horn, and caused loss of the nails by encroaching upon the ungual matrix. These horny masses are disposed on both feet symmetrically.

Among other things, the patient had a noticeable amyotrophy of the muscular masses of the lower limbs and considerable exaggeration of the patellar reflexes.

By what mechanism does gonorrhœa favor the production of these horny growths? We do not believe that there can, in this case, be any question of an infection of the blood by the gonococcus.

The analogy between these cutaneous horns and other manifestly trophic troubles, the symmetrical disposition of the growth, its indolence, its localization or its predominance on the lower extremities, the integrity of the skin near the eruptive masses, lead me to think that it is no question of a direct manifestation of the gonorrhœa, but that between this and the cutaneous alteration there is a necessary, intermediate agent—the nervous system.

I shall not discuss the hypothesis of the polyneuritis, for in similar cases reported by MM. Fernet and Vidal the patellar reflexes were notably exaggerated.

It is then the spinal cord that is at fault; this is the opinion of M. Jacquet, who obtained a rapid amelioration in M. Vidal's patient by hydro-therapy.

I do not consider that the tegumentary dystopia is the result of a reflex action, having the affected articulations as a point of departure. It seems to me more logical to admit that the blennorrhagic virus—gonococcus or toxin—has reached the medullary axis and modified its trophic power.

In this manner a new conception of the etiology of gonorrhreal rheumatism has developed. Although I consider it founded upon a solid basis, I am far from considering every gonorrhreal rheumatism as of myelopathic origin. Some arthritides assuredly result from the presence of microbes or toxines in the affected parts.

Dr. Jeanselme, *Semaine Medicale*.

THE TREATMENT OF ACUTE GONORRHEA IN THE FEMALE.

According to Dr. Strassmann, the assistant in the gynecological polyclinic of the Berlin Hospital, the vaginal injections so universally used in all forms of female blennorrhagia are absolutely contra-indicated in the acute stages of this affection. Used in these conditions, it favors the dissemination of the gonococci, especially their penetration into the uterine cavity, thus bringing about complications that might have been avoided.

Our colleague distinguishes two varieties of acute gonorrhea in the female:

In the first, which is localized essentially at the vulva and urethra, the use of all varieties of vaginal injection should be absolutely forbidden.

The treatment of these cases should consist in rest in bed, light nourishment, the use of purgatives

and balsams. Locally, nothing but washing the vulva with a warm solution of zinc sulphate (one tea-spoonful to a quart). In the intervals between the ablutions, dressings, soaked in lead water, should be applied to the genitals. If these dressings are used a second time they should be carefully disinfected by boiling. Compresses wet with glycerine or with ichthyolized vaseline (15 to 20 p. c.), may also be used to cover the vulva, and Dr. A. Garofalo, of the hospital of San Giovanni, in Rome, claims that the ichthyol has a particularly favorable action upon gonorrhreal vulvitis as well as upon the Bartholinitis that so frequently complicates it.

The second variety of acute blennorrhagia commences at the cervix uteri and shows itself by an abundant muco-purulent discharge from the cervix, accompanied by an inflammatory erosion around the external os.

This is very common in multiparae.

In this form, M. Strassmann abstains equally from injections; in the beginning at all events. He confines himself to swabbing out the vagina with a 1 p. c. solution of corrosive sublimate and tamponing it afterwards with gauze moistened with glycerine and iodiform, 3 to 5 p. c.

Dr. Garofalo prefers to use 15 p. c. ichthyolized glycerine for tamponing; this has the advantage of being inodorous and its antiphlogistic action is very rapid.

Only when the discharge has become mucous should we have recourse to vaginal injections.

Semaine Medicale.

ALCOHOL IN FEVERS.

1. If the tongue becomes dry, discontinue; if moister, the drug is doing good.
2. If the pulse becomes quicker, harm is being done, and the contrary if slower.
3. If the skin becomes moister, the antipyretic effect of alcohol is obtained, and again good is being done.
4. If the breathing becomes easier continue the drug.

Armstrong.



THE VALUE OF THE ROME-LAEVE LAWS IN THE DIAGNOSIS OF ABDOMINAL MALIGNANT TUMORS.

A. Woinowitsch—Ibid.

In the year 1893, W. Romelaeve made a law that a diminished secretion of nitrogen in urine, in abdominal tumors to be patronemonic with malignancy, carcinoma can be expected with certainty.

In 15 cases author made investigations of these laws: six cases of carcinoma of the pylorus, six cases pylorus carcinoma with liver metastasus, three carcinoma of the esophagus and one liver carcinoma besides two cases of uterus ventriculi. In 11 cases of carcinoma, the daily increased secretion of urea below 12.0 (14.2 and 15.1) which does not 12.0 (14.2 and 15.1) which does not coincide with the law of R.

In ulcers ventriculi the mean urea secretion in one case 18.9; in another 21.3. The R. law, however, by the diagnosis of tumors, is not without its significance, namely, in the differential diagnosis of ulcer and cancer of the stomach.

THE TREATMENT OF EMPYEMA

A. Januschewsky, in *Wojenno Medicinsky Schurnal*, Aug.—Nov., 1895."

Author reports histories of 14 cases thoracotomies was carried out without, however, rib resection. After a thorough disinfection of the field of operation, under chloroform with the aid of 2 per cent. cocaineization of the surroundings, a 6-inch cut is made in the fifth or sixth intercostal space, in the anterior auxiliary line and the pleura pierced through the opening, retracted and a suitable drain established. When the exudation showed itself in drops only, the wound was washed (1.5000) sublimate or 2 per cent. baric solu-

tion to wash away the possible coagula of pus; entire evacuation of the exudate is not expected, but dressed, touching the wound either with the finger or an instrument. On the same day the wound is redressed. In three cases after the operation the course was entirely without elevation of temperature; in the others the temperature rose at times to 38 and 39 degrees; probably from stopping of the drain, which, however, the author does not ascribe to the method; or that a stagnation should set in, in the rib secretion method in consequence of agglutination and bridge formation.

As to the closure of the fistula the earliest term after the operation was 55 days (1 case). Two cases closed themselves two months after the operation, in four cases three months after, in three cases five months and one case seven months after the operation. In view of the above, the author remarks that an early performed operation does not determine the time of fistula closure. In cases when the operation was performed early on the 14th or 18th day, the fistula stood five months. The quality of the exudation, the bacteriological character of the same, is to be taken into consideration.

From the result of his cases, author pleads the thoracotomy without rib resection, the latter method to be used only when the intercostal spaces are narrow or when secondary operation is necessary.

CHANGES IN THE BLOOD COMPOSITION IN SOME DISEASES.

Ljubomadiom, Ibid.

We will briefly give the results of observation by author in the Moscow Military Hospital:

(a) Marasmus senilis—(observations made on the veterans). (1) di-

minished quantity of red blood corpuscles and hemoglobin; (2) an increase in the white blood corpuscles; (3) a relative and absolute increase in the neutrophiles and mononuclear cells. The leucocytes are relatively diminished and somewhat absolutely increased.

(b) Tuberculosis: (1) The quantity of the red blood corpuscles, somewhat increased (on an average of 12 per cent.); (2) hemoglobin diminished to more than 1-4 of the normal; (3) white blood corpuscles increased 1 1-2 times; (4) the neutrophiles, especially increased in quantity; lymphocytes greatly diminished on absolute and relative increase in the mononuclear c.; (5) rosenophiles more than normal. All these changes progress with the further development of the disease.

(c) Scorbutus. (1) quantity of r. b. c. and hemoglobin diminished; (2) w. b. c. are likewise less than in the normal. In the febrile stages the leucocytes are greatly diminished. In mild cases and in the early stages the mononuclear w. c. are increased; in grave cases and in later stages of the disease the polynuclear are increased in quantity.

(d) Pleuritis: In the serious form the constitution of the blood is not pathological. In hemorrhagic pleurisy a diminished amount of the r. b. c. and the hemoglobin. The presence of eosenophiles in the blood indicates the hemorrhagic condition of the exudate. In eight cases of serious pleurisy no eosenophiles were found. In six cases of eight of hemorrhagic pleuritis a marked quantity of the eosenophiles was found. The prevalence of the polynucleas leucocytes is an omen of unfavorable prognosis, a decrease of the w. b. c., and if the mononuclear white cells predominate indicates favorable results.

(e) Infectious diseases: (1) Croupous pneumonia—an enormous in-

crease of the neutrophiles; in grave cases—no leucocytes, but eosenophiles instead; (2) Intermittent fever, at the onset of the attack a great decrease in the number of the r. b. c. on hemoglobin; w. b. c. increase 1-2 times; neutrophiles 1-4 times; lymphocytes diminished; mononuclear corpuscles increased more than half, eosenophiles are found. In the end of the attack, the r. b. c. increase, hemoglobin greater in quantity, white large cells diminish (six times less than in the normal state. In the commencement of the transpiration the number of the r. c. reaches nearly to normal, hemoglobin still diminishes, the w. c. twice in number to that of normal.

Great increase in the neutrophiles, nononuclear cells diminish absolutely as well as entirely. During the transpiration the r. c. reach a higher number than in the normal, hemoglobin likewise, leucocytes 3 1-2 times as much as normal, polynuclear cells still on the increase, mononuclear diminish relatively only.

(3.) Scarlet fever. Great increase of the neutrophes, diminished amount of the other white bodies, an increase of r. c. and leucocytes, a decrease of hemoglobin. No eosenophite cells.

(4.) Erysipelas. Number of the r. cells normal, a decrease of hemoglobin, a considerable increase of the white.

Various diseases. Skin diseases ptyriasis supra pilaris, impetigo cisticus) the number of the red bodies and hemoglobin totter about normal, the changes are in the various leucocytes; the nononuclear white bodies especially are increased, very few eosenophites.

Diabetes insipidus, (2 cases). The r. b. c. nearly normal, a slight decrease of the white as well of the hemoglobin, an increase of lymphocytes, a decrease of neutrophiles.



A CHAPTER ON VENEREAL AND SKIN DISEASES.

When, in a patient attacked with variola, mercurial frictions are used there often seems to be a local reaction. The maculae become more apparent since the exanthem disappears more quickly as the reaction is marked. This, Jarisch thinks, resembles the reactions provoked by tuberculin. Therefore if the specific action of mercury is due to this invitation, can other irritants influence syphilides? And Jarisch using turpentine as an experiment, used as a friction the following ointment:

R Acid Salicylic ..10 grains.
Teribith,15 grains.
Ung. Simpl.75 grains,

He has by this means obtained rapid amelioration of ordinarily rebellious disorders, as for instance, palmo-plantar-psoriasis, and also other varieties of the same disease.

In impetigo in children St. Philippe recommends Donovan's solution in proper doses; he finds the itching is subdued and the crusts rapidly detach themselves.

STOMATITIS FROM MERCURY.

The gums should be brushed twice a day with antiseptic solutions, such as salicylic acid, 2-10 per cent.; carbolic acid, 1-2 or 1 per 200; boric acid sal. solution; ulcerations should be touched with nitrate silver, iodine or lactic acid and chromic, which is also of service as showing the location of small ulcers through its coloring them yellow.

Soap made with tobacco juice has been used in Argentina as a remedy against itch, and is efficacious.

Pemphigus has been quickly cured by tinct. belladonna, three or four

drops per day, and tinct. belladonna locally.

—Rev. de Therap. Med. Chir.

IODOFORMINE.

This is derived from iodoform. It is white, odorless and takes its place as a good substitute for iodoform in all the uses of the latter.

CYSTITIS.

R Cantharidine .1 milligram
Dissolve in alcoholis .1 gram
Add Aq. Distill. .99 grams
Three or four teaspoonsful per day.

—Freudenberg.

DIURETICS IN CARDIAC AFFECTIONS.

From observation of 80 cases Laug-
ger concludes that rest is the first
means to employ to provoke diuresis
in patients presenting compensatory
trouble, and that repose often suf-
fices to cause the disappearance of
dropsy by provoking abundant di-
uresis; four weeks of rest generally
causes the difficulty to disappear. The
success of the rest cure is prognos-
tic. It may be continued with digi-
talilis, camphor calomel, diuretine,
etc. The latter combined with digi-
talilis sometimes gives remarkable re-
sults.

—Rev. Ther. Med. Clin.

A CASE OF ADDISON'S DISEASE TREATED BY FEEDING THE PATIENT WITH THE SUPRA-RENAL CAPSULES OF THE SHEEP.—STOCKTON.

Addison's or Basedow's disease is a disease generally fatal. The au-
thor concluded to try the above
means, and found at the end of a
fortnight an appreciable benefit. He
gave two of the suprarenal capsules
per day (cooked); appetite returned,
the red globules of the blood were in-
creased, and the bronzing gradually
disappeared and the case was cured.

TREATMENT OF HERPES ZOSTER.

Purgative.—Locally; absolute dryness of the region affected; apply a sheet of cotton and the following powder:

R Starch.....60 grains
Ox. Zinc. .15 to 20 grains
P. Camphor. .1 to 3 grains
P. Opium1 grain
Anoint any ulcerations.

FOR THE NEURALGIA.

R Ext. of Strausmus. .1 c. gr.
Ext. of Hyocyanus. .1 c. gr.
Ext. of Bellad.5m. g.
One pill; four pills a day.

A REPORT ON DIMINUTION OF TYPHOID FEVER IN ST. ONEN-SUR-SEINE, FRANCE.

The object of this report is to show that the substitution of filtered water for the water formerly used at this town has markedly lowered the mortality from typhoid fever. From 1885 to 1892 the population of 25,000 furnished annually from 15 to 30 deaths from typhoid fever.

Starting with 1891 the authorities installed in public schools and asylums, hospitals, etc., sand filters, which distributed daily 1200 to 1500 litres of pure water, or 20 litres (5 gallons) for each person. This water it appears lost 98 per cent. of the

germs which it contained. It is true that according to analysis made in July, 1892, the Seine water collected at St. Onen, contained 41.2 millions of bacteria per C.C., so that taking these figures as a basis, after filtration (and the loss of 98 per cent. of germs), the water still contained 90,000 colonies, which, theoretically, is not reassuring. It is necessary, therefore, to know more precisely the bacteriological value of the filtered water, which has so notably diminished the prevalence of typhoid fever. The decrease is shown by the fact that from 1885 to 1892 the deaths averaged 19 per year. Since 1892, when filtration was established, the average has been 3 per year, this in spite of the fact that the population has increased from 25,000 to 30,000 in the last decade ('85 to '95). The immunity from cholera in 1891 enjoyed by the institutions of the town, is attributed to the use of filtered water. Other towns using the water from the same river, present corresponding results by using filtered water.

The report is interesting. It shows again the necessity of furnishing pure water to cities, and the influence of a fouled drinking water in the production of typhoid. These are truths, which are no longer questioned by anyone.

—Bull de l'Academie de Med.

Current Literature in Obstetrics and Gynecology.

E. D. KINNEY, M. D., Boston, Editor.

ATROPINE IN UTERINE HEMORRHAGE.

It is now about four and one-half years since Freud first called attention to the value of this drug in uterine hemorrhage. Since that time it has been used in almost all the pathological conditions giving rise to hemorrhage from the uterine organs. In many cases a decided im-

provement has followed the administration of the first dose, and in no case does the drug have to be repeated more than six times.

The hypodermic use of the drug is decidedly to be preferred, as it relieves the most profuse uterine hemorrhage in a very few minutes. It may be given in doses of 1-100 gr., and repeated in from three to four

hours, or at longer intervals, as the symptoms may indicate.

In dispensary practice, where most of these cases are seen, a good method is to give a hypodermic of 1-100 gr. sulphate of atropine and in the interval prescribe 1-100 gr. triturates of the same drug, to be taken from six to eight hours apart, and request the patient to return the following day, at which time the dose can be repeated if necessary.

TREATMENT OF SUBINVOLUTION OF THE UTERUS.

Poulat has found the following methods of treatment to be most beneficial in recent and old cases of subinvolution. In the former cases he recommends freedom from exercise, with antiseptic injections. Hot baths and hot douches may be advantageous additions in some cases. For the cases of longer standing the patient's general condition must be investigated, tonics and alteratives administered and hygienic measures carried out. Ergot has not been so satisfactory in Poulat's experience as hydrastis has been in securing contraction of the tissues. In reference to local treatment he advises curetting the endometrium in cases of fungoid vegetation; also prolonged hot, intrauterine injections with antiseptic precautions.

—The Medical Herald.

INTERVENTION IN PREGNANCY COMPLICATED WITH ALBUMINURIA.

At the annual meeting of the Southwest Texas Medical Society Dr. Paschal, of San Antonio, read a treatise on this subject. He said there were few complications more dangerous to the pregnant woman than puerperal eclampsia, and that the etiology is no better understood by us than it was by physicians twenty-five years ago.

The lesions found in cases dying from puerperal convulsions are epithelial and interstitial nephritis; interstitial cirrhosis of the liver with infarcts; considerable development of the connective tissue in the uterus or tubes; inflammation of the car-

diac parenchyma; and considerable distension of the cerebral capillaries, showing that all the organs are affected in eclampsia, and that the appearances of an acute intoxication are present. As the cause of this intoxication is due to uneliminated effete matters, he considers the treatment should be preventive, rather than empirical. As albumen is as a rule present in puerperal convulsions, the urine of every pregnant woman should be examined frequently, and if present, strict diet should be enforced and other measures employed to eliminate effete matter. If, however, in spite of treatment, the patient's condition does not improve, intervention should be employed and labor induced any time after the seventh month, or as the emergency of the case may demand in symptoms of uremia.

He considers the danger attending the induction of premature labor practically nothing, and while a premature child is harder to raise, this should not interfere with relieving the mother of the dangers that threaten her.

Tanner gives the statistics of forty-four cases of induced premature labor extending over a period of ten years. The mortality of the mother was 2.2 per cent, and of the children 18 per cent. A single death was independent of the method employed, the mother dying of pernicious anemia, thus making the mortality really nothing. At Leopold's clinic during three years and a half there were eighty-one induced labors. These labors were done for contracted pelvis, and he considers that the mortality should not be greater if it were done for albuminous complications.

PREGNANCY AND SMALLPOX.

Van der Willigen (Nederland. Tijdschr. voor Geneesk., No. 11, 1895), in closely observing 432 cases of smallpox in women under 50, made particular note of 80 who were pregnant. Of these 15 per cent. died, while the mortality of the non-pregnant cases was 11.08 per cent. Van der Willigen, like some previous authorities, finds that pregnancy in-

creases the predisposition of a patient to the graver forms of variola. In the 80 cases confluent smallpox was seen in four and hemorrhagic in six cases; all the ten died. In the 352 non-pregnant cases the confluent form was observed in 3 and the hemorrhagic in 11 patients; two of the confluent cases recovered. Two pregnant women died of milder forms; of the total, 12, there died five undelivered, and most of the others very shortly after birth without any trace of puerperal infection. Of the primipare, nine per cent. died; of the multipare, 17.25 per cent.; 6.25 per cent. of women attacked by smallpox early in pregnancy died, whilst the mortality of those who were infected later amounted to 20.83 per cent. Abortion or premature delivery was noted in 23 of the 80 cases during the course of the attack of smallpox. In six the same took place after convalescence from the disease; 16 children were delivered alive in cases where the smallpox was still in progress; eight at term, and 8 prematurely; only three lived longer than six months. Several died of variola; two were clearly born with it.

TUBERCULOSIS OF THE HUMAN PLACENTA IN RELATION TO CONGENITAL TUBERCULOSIS.

Schmorl and Kockel (*Beitrage zur Pathologische Anatomie*, XVI, Part 2) state that the exact method by which the tubercle bacilli passed from the mother to the fetus was not understood at the time when Birch-Hirschfeld and Schmorl reported their case of congenital tuberculosis in 1891. Lehmann's observations show that in acute miliary tuberculosis during pregnancy the placenta may be affected with tubercle as well as the other organs. The placenta, it seems, may occasionally be affected in cases of chronic, pul-

monary, as well as acute miliary tuberculosis.

Autopsies on cases of advanced pulmonary tuberculosis frequently show circumscribed foci in organs other than the lungs, such as the liver, spleen or kidneys. Gartner has demonstrated that where animals with pulmonary tuberculosis are pregnant, the fetus is not so very rarely infected with tubercle bacilli. The present authors have met three cases bearing on the subject.

(1) Autopsy revealed acute miliary tuberculosis; the subject was in the eighth month of pregnancy, and was brought to the hospital in an unconscious condition. Cesarean section was performed, but the child died after two hours.

(2) This patient died during pregnancy with acute miliary tuberculosis.

(3) A case of chronic laryngeal and pulmonary tuberculosis—died suddenly of profuse hemoptysis. Cesarean section was performed soon after death, but the child was found dead.

In all the cases placental tubercle was found, but only a very little in case 3, and less in the placenta than in the other organs in the other two cases. The tubercle bacilli were probably in all three cases carried to the placenta in the circulating blood, but in No. 2, where there was also tuberculous peritonitis, the bacilli, though less likely, might also have been carried from the peritoneum into the uterus by the fallopian tubes. In acute cases of miliary tuberculosis the bacilli circulating in the blood must be equally distributed to all organs, and the only way to explain why in cases 1 and 2 less tubercle was found in the placenta than in the other organs. In all three cases tubercle bacilli were found in the fetal placenta villi, but only in case 2 were any bacilli found in the body of the fetus.

—Univ. Med. Magazine.

Current Surgical literature.

T. H. MANLEY, M. D., New York, Editor.

EXTRACT FROM DISCUSSION ON VAGINAL HYSTERECTOMY FOR PYO-SALPINX AND FOR UTERINE MYOMATA.

ERNEST W. CUSHING, M. D.,
BOSTON.

Professor of Gynecology at Tufts' Medical School, Surgeon to the Charity Club Hospital.

Present opinion in France is very favorable to this method. I will not say that its adoption there has not been helped a little by being a French method. I saw a great deal of good work in Paris last summer. My methods of operating will be profoundly influenced by what I saw.

It must not be forgotten, however, that this method has made its way in France against the most violent opposition. When first introduced by Pean, it was opposed by most of the leading surgeons there, but gradually one after another was converted and led to see the advantages of this procedure. The records of the Surgical Society of Paris and of the French Congresses of Surgery show that the same arguments and objections which are now made in this country against this procedure were made vehemently and earnestly a few years ago by eminent French surgeons who now favor and use this method of operating.

In Germany there is Landau who has adopted this system, and they call it there by his name. He has done very good work, but in a great many cases he opens the abdomen to finish. He is not content with leaving any of the diseased tissue, and opens the abdomen to finish his operation in all cases where he cannot remove the diseased appendages through the vagina.

NOTES OF CASES OF EMPYEMA.

Below the age of twenty-three it is unnecessary to remove portions of ribs, but above that age it is essential in order to insure contraction of the abscess cavity. In urgent empyema it is best to use no chloroform, but to freeze the skin with chlor-ethyl spray, which is both rapid and efficient, and the patient suffers no pain. In the absence of chlor-ethyl, carbolic acid may be used. In patients above twenty-three, portions of ribs may be removed the day after the opening, or whenever the breathing is sufficiently relieved to bear chloroform. I am satisfied that in urgent cases chloroform is not devoid of danger. If the double operation must be completed at once, then let a portion of the pus be drawn off by an aspirator previous to giving the anesthetic. In Case 4 we had much anxiety as to the chloroform, and Dr. Connel, of Peebles, who was present, confirmed my observation at the time as to the danger of an anesthetic in urgent cases. In Cases 3, 5, 6 and 7 a portion of the pus had been aspirated previous to the chest being incised, and in these cases we had no trouble with chloroform. The presence of pain on pressure as a symptom of empyema is most important, more especially in local collections, and this must be borne in mind as a valuable aid in the diagnosis of the point or points where pus is to be found. The pain is not, however, present in every case. As regards the operation, the use of chlor-ethyl is strongly recommended in the simple opening of the chest. The only special instruments required in removing portions of ribs are rib-bone forceps and a curved periosteum separator, not too sharp, to insure the safe-

ty of the artery on the lower edge of the rib. The simplest form of aspiration is Helmsley's, with which any amount of fluid may be removed with the least possible trouble.

—Dr. Reuton in *Practitioner*, Jan. '96.

FOREIGN BODY IN THE BLADDER.

M. Froelich exhibited a huge mass of debris from a crushed calculus removed from a female bladder. The patient was 22 years old. Four years before she introduced into the urethra a hairpin. The calculus in the bladder was the volume of a hen's egg.

The mass was removed through the supra-pubic incision, after efforts had been made to deliver it, subsequent to crushing.

M. Heydenreich observed that this case of stone belonged to a distinct class, the foreign body being the starting point, and usually the lithotripsy would fail, with production of possible harm.

PERINEAL ABSCESS.

M. Pousson communicated an observation on a young man who had a perineal abscess, with escape of urine from a false passage made with a sound. A moderate incision was made to open widely the stricture, and a plastic operation made to close the leak.

A catheter was left in the urethra. But there was constant escape of urine through a perineal opening. Catheter was now removed, and six days later healing was complete.

Soc. de Med. de Nancy, *Gazette Hebdom.*, 9 Jan., '96.

TREATMENT OF ACUTE OSTEO-MYELITIS OF LONG BONES.

(These de' St. Petersbourg, 1895.
By Walter.

This author comes to the following conclusions:

First—The results of treatment depend on the thoroughness and promptness of operation.

Second—In all cases, the bone shaft must be freely opened, thorough graftage, disinfection and drainage employed.

In the milder forms local and constitutional measures may succeed with bone trepannage.

—*Revue de Chirurg.*, Dec., '95.

A TEST FOR DISTINGUISHING BETWEEN SEROUS EXUDATIONS AND SIMPLE TRANSUDATIONS.

Rivalta (Rif. Med., April 24, 1895) finds that if a drop of glacial acetic acid is added to a serous exudate (that is, an inflammatory effusion) a slight white cloud forms in the wake of the falling drop, which precipitate redissolves on the addition of more acid. No such reaction takes place in mere transudation, that is non-inflammatory fluids. A good way of doing the test is to let fall a drop of the suspected fluid into 200,400 c. cm. of distilled water acidulated with two to four drops of glacial acetic acid. If the fluid is an inflammatory exudate, a whitish streak follows the falling drop, and on the addition of more acid, is dissolved. Examination of the precipitate shows that it belongs to the class of nucleo-albumins. The author's method presents a clinical advantage, in that a mere drop or two of the fluid (such as can easily be withdrawn with a hypodermic syring.) suffices to provide material for the test.

Med. and Surg. Reporter.

CLEANING RUSTY INSTRUMENTS.

Brodie gives the following as an effective method of cleaning rusty instruments: Immerse in a solution of chloride of tin in distilled water, allowing to remain over night, then rub dry with chamois after rinsing with running water. They will be of a silvery brightness.

British Journal of Dental Science.

Therapeutical Progress.

BRIEF NOTES ON NEW AND RARE REMEDIES.

From the American Druggist.

COCAINE-PHENATE.—(Phenylate, Carbolate.) Viscid yellowish mass, soluble in 50 per cent. A., insoluble in water. Local anesthetic. (Castrorrh., dental operations, etc.) Applied in 1 to 3 per cent. solution, 5 per cent. snuff or pure. Dose, 1-12 to 1-6 gr. Hyp. inj. 14 min., of 1 to 1000 solution.

COLCHICINE.—Amorphous, active principle of colchicum. The crystalline (chloroformic-colchicine) is a combination of colchicine with chloroform. Prismatic, bitter, crystals, very soluble in A., C., E., less so in E. and glycerine, insoluble in cold water. Anti-rheumatic; gout, etc. Very poisonous. Dose, 1-120 to 1-160 gr. Antidotes—stimulants.

CONIINE HYDROBROMATE.—From Conium maculatum. White, prismatic crystals or powder. Soluble in 2 water, 2 A. Anti-spasmodic, paralyzing respiratory muscles, anti-neuralgic. Tetanus, inj. 1-12 to 1-6 gr. every 2 hours. Whooping cough or cardiac asthma 1-30 to 1-15 gr. 3 to 5 times daily. Children, 1-80 to 1-48 gr. 2 to 4 times daily.

CONVALLAMARIN.—Glucoside, from Convallaria Majalis. Brownish white bitter powder. Soluble in water, A. Powerful heart tonic, resembling digitalin, but not cumulative. Dose, 1-2 gr. every 1 to 2 hours, gradually increased to 5 gr.

CONVALLARIN.—Glucoside from Convallaria Majalis, not to be confounded with Convallamarin. Crystals very soluble in A., insoluble in water. Drastic purgative.

CORONILLA VARIA.—(Coronilla bigaree, nat. ord. Leguminose.) The

entire plant is used. Cardiac, dose of drug, 30 to 60 grs., of extract, 15 to 30 grs.

COTO.—The bark of *Palicura densiflora*. Bitter, aromatic, pungent taste. Antisudorific, antidiarrheal (phthisis, typhoid fever, etc.) Dose of 10 per cent. tincture, 50 drops 3 times daily.

COTOIN.—Yellowish white powder, slightly soluble in water, freely in A., E., C., and alkalies. Antisudorific (night sweats), antidiarrheal (typhoid fever, cholera, etc.). Dose, 1-2 to 2 grs. dissolved in acetic ether 1 to 4.

CREATIN.—Constituent of muscular tissue. Opaque, white solid with bitter, acrid taste. The monohydrate occurs in transparent prisms. Soluble in 70 water. Muscular and digestive tonic. Dose 1-1-2 gr. 3 to 5 times daily.

CREOLIN.—Emulsion of carbohydrates from tar with rosin soap (Pearson) or with creosol-sulphuric acids (Artman). Brown, syrupy, liquid, pungent, phenol-like odor and taste. Substitute for carbolic acid. Applied in 1-2 to 2 per cent. solution.

CREOSAL.—(Creosote tannate.) Dark brown, very hygroscopic powder, very soluble in W., A., Gl., and acetone; insoluble in E. Recommended in powder or solution in treatment of air passages. Daily dose 45 grs.

CREOSOTE CARBONATE.—(Creosotal.) Clear, oily liquid, free from taste and odor of creosote. Contains over 90 per cent. creosote. Insoluble in water, soluble in oils. Antitubercular. Dose 60 min. daily, in divided portions, increasing to 4 fl. drs.

(To Be Continued.)

Prescriptions.

TREATMENT OF WHOOPING COUGH.

From London Med. Times.

Citric acid lemonade has been recommended as a prophylactic, also use of ten per cent. solution as a spray.

Local applications: Nasal insufflations of finely-powdered boracic acid gr. ii-iii every three hours during the day, and once during night (Holloway), or equal parts boracic acid and roasted coffee (Guerder), or gr. x-xv of the following:

R Pulv. gum benzoin. aa dr. 4
Bismuth salicylat aa dr. 4
Quinin. sulphat aa gr. 15
To be reduced to finest powder.—Bartholow.

Local applications by gargle, swab or spray:

Corrosive sublimate 0.1 cent. solution.

Pot. bromide alone or with belladonna or ipecacuanha (Korner).

Resorcin, two per cent. spray.

Boroglyceride

R Eucalyptol
Iodoform aa dr. *

Sig: To be applied to mucous membrane of nose.

Inhalations:—

Sulphurous acid.

Fumes from Stockholm tar (place in iron vessel or large gallipot and stir with hot poker).

Carbolic acid.

R Acidi carbolic pur. dr. $\frac{1}{2}$.
Potassii chloratis 2 dr.
Glycerine 4 dr.
Aquam ad 6 oz.

Sig: Use with a steam atomizer three times daily.

—J. Lewis Smith.

R Quinin. sulphat 1 dr.
Acidi sulphurici $\frac{1}{2}$ dr.
Aq. destillat. 6 oz.

Sig: Use as a spray to fauces every two hours for first three days, and every three hours afterwards.—Kolover.

Sulphurous acid gas may be inhaled. It is also recommended that the room occupied by patient by day be disinfected at night with this gas, and the sleep-room by day.—Mohn.

R Ammon. bromid.
Potassa. bromid aa 1 dr.
Tinct. belladonna 1 dr.
Glycerin 1 oz.
Aq. rosæ 4 oz.

Sig: Use as a spray, from four to six times daily.—Keating.

Internally.—In catarrhal stage.

R Vin ipecac.
Tinct. camph. co aa 1 dr.
Liq. ammon acetatis 2 dr.
Syrup scillæ 3 dr.
Aq. ad 1 $\frac{1}{2}$ oz.

Sig: One teaspoonful every four hours.

Bromoform is best given to children in alcoholic solution in syrup of acacia, in doses of from one to five minims three times a day (Lowenthal). It may also be conveniently given well mixed with malt extract.

R Liquor hydrogen peroxid (10 vols) 6 dr.
Glycerin. puriss 4 dr.
Aq. destillat ad 3 oz.

Sig: A tablespoonful in a wineglassful of water, five or six times daily.—B. W. Richardson.

R Acid carbolic pur. 3 gr.
Sodii bromidi 20 gr.
Tinct. belladonnae 20 drops.
Glycerin 2 dr.
Aquam. ad 2 oz.

Sig: A teaspoonful for a child (three or four years of age) occasionally.—B. W. Richardson.

R Codein sulphat 1 gr.
Acid carbolic pur 8 gr.
Syrup limonis.
Syrup simplicis an $\frac{1}{2}$ oz.
Glycerine pur. 1 oz.

Sig: A teaspoonful every two or three hours.—Hughes.

To relieve paroxysm holding and raising greater cornua of hyoid for 60 to 90 seconds sometimes is effective. In severe cases inhalation may be given of chloroform or of the following:

R Chloroformi 1 oz.
Aether sulphuric 2 oz.
Ess. terebinthin rect. $\frac{1}{2}$ dr.
—Wilde.

R Pulv. ipecac. co gr. $\frac{1}{2}$.
Pulv. extr. conii 1 gr.
Pulv. cinnamon 2 gr.
Pulv. sacch. alb 4 gr.
Ft. pulv.

Sig: To be given at night for restlessness.

R Antipyrin gr. 2.
Sacch. alb. gr. 20.
M. et ft., chart, No. xiv.
Sig: One powder three times a day and once at night for very young children.—Sonnenberger.

R Pulv. bellad. rad 1-5 gr.
Pulv. ipecac. co gr. $\frac{1}{2}$
Sulphuris subl. gr. 4.
Sacch. alb. gr. 10.
M. et ft., chart No. i.
Sig: One powder from two to ten times a day, according to age.—Germain See.

Antipyrin and digitalis to prevent bad effects of paroxysm on heart and circulation.

Antipyrin gr. i for each year of age, with maximum dose of gr. v. Tr. digitalis mi for each year, maximum dose mi.—Sajous.

R Cupri arsenitis gr. 1-100.
Tinct. nucis vom 5 drops.
Aqua 2 oz.
Sig: A teaspoonful every half hour for six consecutive hours, and then every one or two hours afterwards.—W. B. Stewart.

In declining stages, astringents and tonics may be given with cod liver oil, malt extracts, etc.

R Alum. sulphat 24 gr.
Ac. sulphur dil 12 drops.
Syr. Papaveris 4 dr.
Aquam ad 3 oz.
Sig: Two teaspoonfuls every six hours.

R Ext. belladon. gr. $\frac{1}{2}$.
Pulv. aluminis 24 gr.
Syr. zingiberis
Aqua aa 1 $\frac{1}{2}$ oz.
Sig: A teaspoonful every two hours for a child of one year.—Goodhart & Starr.



CARE OF THE BABY.

"When my first child was born," said little Mrs. A., "I had the usual young mother's craze for a daintily-kept baby. The layette was one of those gorgeous gift affairs, with frocks which Victoria, I am sure, would have thought much too fine for the royal children—besides every conceivable fantasie in which the most luxurious-minded infant could by any possibility be attired. I used to gloat over the sachet-scented, exquisite little belongings, and the moment I was up and about after baby's birth I began to play doll with my small daughter, decking her out in first one thing and then another.

"I had one of those fussy French nurses, immaculate as a new pin; and between us we scrubbed and polished up that baby until it's a marvel it didn't fade away before our eyes. After a bath in almond-mol-softened water, with plenty of Lubir, and sweet-smelling talcum, she did look a darling in her sheer, beribboned draperies, and I, foolish mother, never noticed her languor and waxen skin. I did take note

that her hair wouldn't grow; that worried me, for, no matter how becomingly dressed, a child with a billiard-ball style of coiffure does not realize the fondest dreams of the maternal heart. I sewed dolls' crimps in her bonnets, which was all very well for outings, but inadequate for home, so finally I called in the doctor.

"He was a very grumpy person, very curt and not over civil at times. 'Bathed too much,' he said, briefly. 'Look at her skin—all the life washed out of it. Too much care given that child. Let her get dirty and stay dirty. Nothing better for children than judicious neglect.'

"It was a new idea, and I went to work at it. Very shortly we went to our country place, and I noticed the farmers' babies who ate pie and pickles for breakfast, hot biscuit and pork for supper, sat in puddles and went bare-headed whether the rain fell or the sun scorched. They were inevitable victims of future dyspepsia, but the fact remained that, as babies, they were sturdy and rosy,

and mine wasn't; and I concluded to try judicious neglect.

"I invested in gingham pinafores and stout shoes, dumped a load of clean sand at the side door, and inaugurated a perpetual feast of mud pies. Pauline was instructed not to say, 'Don't' save in extreme moments, and baby began to live the life of a young animal left to the beneficent care of sunshine and fresh air, undisturbed save at regular intervals for food and sleep.

"I bought a pig that she might hang over the pen and tickle piggy's back with a stick. It afforded her hours of pure rapture to echo the pig's grunts with her silvery coo, and in some mysterious fashion the association was conducive to health. I never could understand why, only it was. She would always return blooming and serene, and if to a nap, slept better after having spent this pleasant period with her porcine friend.

"I bought chickens that she might feed them, got doves and other pets about the place, finding that animals gave interest but no over-stimulus to the baby nerves. In short, I never had my wax dolly again; but in the autumn I carried home a blooming, sturdy little maid whose splendid spirits and perfect health more than compensated for occasional mud stains and torn pinafores."

PICKLED FISH.

A good relish for lunch is pickled fish. Take cold boiled fish, and, the day before it is to be used, sprinkle salt over it and pour on a moderate quantity of vinegar. Lemon juice is especially good as a substitute for vinegar, and gives the fish a more delicate flavor. The fish should be carefully prepared beforehand by removing all the bones and separating it into pieces about as large as half your hand. A fish that has very few small bones is the best kind to use in this way. The dish should be garnished with parsley and sliced lemon. In fact, all dishes of fish, whether hot or cold, should always be daintily served and garnished with parsley and lemon.

When this dish of pickled fish is used for lunch or tea, it would be well to serve with it a salad of sliced tomatoes with a French dressing. The tomatoes must be scalded, then carefully peeled and sliced, and set on the ice to cool. It is best to make the French dressing at the table. Use a wooden spoon and fork. Put into the spoon a saltspoonful of salt, a dash of pepper and a little vinegar, perhaps a half teaspoonful, or a squeeze of lemon; mix these together with the fork, then fill the spoon with oil; mix together again and pour on the tomatoes. This must be repeated until there is sufficient dressing for the dish, and about one spoonful to a tomato should be allowed. This is very quickly done when one has learned the knack. The best of imported salad oil should be used. Lemon juice is very nice in this dressing instead of vinegar for those with whom the latter does not agree. When lettuce is used it is indispensable to make the dressing on the table so as to have the leaves fresh and crisp, for, by standing in the dressing for any length of time they become "soggy" and wilted.

—New York Tribune.

THE PARISIAN BATH.

Parisian women put starch in the bath to soften the water, starch being cheaper than borax or toilet vinegars, and more trustworthy than ammonia, which, it is said, induces a growth of down on the skin. The Parisian ladies' maids prepare many delicate toilet waters. They have materials on hand for meal baths, starch baths, flower baths, sea baths and medicated baths. What is regarded as a luxurious bath contains as many ingredients as a Christmas pudding. The bathtub is lined with a linen sheet gored so as to fit the tub. The bath bag contains perhaps almond meal or oatmeal, with orris root, and the contributions of at least a dozen bottles. The tub being filled almost to the edge, the bather gets in and stays there until she is scented through and through.